

BODE'S

Geraniums

1960-1961 CATALOG

WHOLESALE GROWERS & SHIPPERS

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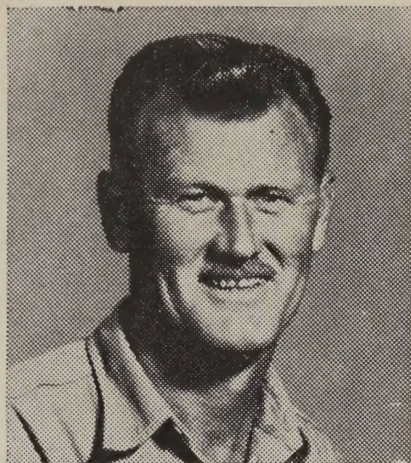
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SOUTHERN CALIFORNIA GERANIUM GARDENS

BOX 109 — GARDENA, CALIFORNIA — PHONE: COMPTON, CALIF. — NEWMARK 1-5538



Fred A. Bode, Jr.

A Little About Our Business

In June of this year, 1959, a large shipment of cuttings was sent to Sunnyfields Greenhouses on the first American Airlines' jet flight between Los Angeles and Boston. The shipment was loaded directly from our trucks onto the plane five minutes before departure. Four hours and twenty minutes later the plane was in Boston. This was not a trick shipment. We make regular shipments on this flight and other jet flights. Geraniums are an important commodity for the airlines and while most other industries use airfreight for rush orders, practically all geraniums are shipped airfreight. We will contribute about 140 tons this year.

Because geraniums have a very low basic value, and because geraniums are shipped airfreight as the standard method, they receive the lowest rates possible.

Many geranium growers have entered the industry since airfreight became practical; most of them have not remained. But, we were shipping geranium cuttings long before the advent of airfreight and even before Parcel Post became dependable for smaller shipments — by the only method then used, Railway Express, which is no longer recommended.

We are the oldest and largest of the California Geranium Field Growers with 85 acres planted entirely to geraniums. Many varieties are in trial, stock building, or commercial production. Some 500 varieties are offered in this catalog.

The family has always been in horticulture and in a little over 20 years we have grown from a part-time geranium concern to an organization, during the shipping season, of approximately 60 people. And, from an occasional order in 1938 to many days of shipping which surpass $\frac{3}{4}$ -ton of airfreight. Also, we are the only California concern equipped with all postal equipment necessary to eliminate delays at the post office.

Our business reflects a steady increase of satisfied customers. Many of the customers that we supplied in the 1930's we still supply today. And, we are still a family business, with Fred A. Bode, Jr. doing the general supervision, Mrs. Elizabeth Bode, his mother, supervises the packing of all orders; Miss Betty Bode, his sister, runs the business office; his wife, Alice, does research, catalog, and other general horticultural editing, and his son, Fred III, now devotes his time to general problems and hybridizing.

While most of the California industry is based upon a short, high-demand season, our business is practically a year-around one, being slack only during the heat of the summer — as is usual in the nursery business. Many of the women working in our shipping room like to work steady, except when their children are out of school during the summer. Thus, we are able to give as steady employment as is desired, and still keep a trained group together.

PLASTIC. In the 1956-57 catalog we mentioned that we were rooting our cuttings under plastic. We worked six years with plastics, experimenting with the most suitable types of covered benches, houses, and ground beds. Last year every inch of rooting space was protected by plastic and the quality of rooted cuttings was far superior to the old bed method. Only the fact that all of our rooted field-stock was protected from rain by plastic made it possible to get our fields planted in the spring of 1958, a little late, but with healthy stock, while most California growers suffered severe waterlogging in their field-stock cuttings, causing the severe shortage of stock during the 1958-59 shipping season. While expensive, the advance experimenting that we do has improved the general practice used in our industry through the years, and it is one of the many reasons that we constantly lead in quality and receive the confidence of the greenhouse growers in the number of cuttings ordered.

CAREFUL CONTROL is maintained at all times from selection of planting stock to the final delivery of the finished cutting to our customers' greenhouses. Heavy roguing, careful selection of stock plants, and proper feeding has enabled us to develop quality strains. Varieties, like Palmier's salmon Supreme, which tend to deteriorate, have had special attention.

The best testimony for our careful up-grading is the demand for our planting stock by our own competitors. Every spring we supply large quantities of stock for field planting. Great care is used in cutting in the fields. Baskets are kept light, and cuttings are never dropped into the rows to wilt, never put into sacks, and never packed in the field. Cuttings brought to the shipping room are carefully stripped, sorted, and packed under the experienced supervision of Mrs. Elizabeth Bode (Mrs. Fred A. Bode, Sr.).



Mrs. Fred A. Bode, Jr.

A PINTO TAG NURSERY. To the best of our knowledge, we are the only California Geranium Field concern holding this shipping permit which allows shipping throughout California without agricultural inspection; therefore, no delivery delay. This inspection certificate is given only to clean nurseries after a year of periodic inspections during which no injurious pests are found. Also, to maintain this certificate semi-annual inspections must show that the stock is clean. We have held a Pinto Tag for nearly 14 years, almost as long as Pinto Tags have been in existence. Also, we are the only Geranium Field Grower licensed to ship into all states requiring licenses or permits.

Two types of pest control are practiced. We have an eleven-row boom sprayer which is tractor drawn. Also, we dust with either a tractor-mounted duster or, where plants are too close, with a power-driven, back-pack duster. Formulas are constantly changed to avoid any build up of resistant mites. All our fields are dusted every week at a cost of \$2500 to \$3000 per month.

FEEDING. Many growers ask what we feed, stating that they wish to use the same practice. Our feeding is a very specialized system that we have worked out to produce the type of stock necessary to produce cuttings with as short-jointed, good shipping quality, and high rooting ability as is possible. Also, there is an economic control. In acreages as large as ours the application of fertilizer that might not be needed, or fertilizer that is deficient in some elements that would limit the availability of other chemicals applied, would amount to considerable wasted money. Soil being prepared for new plantings receives an average of \$125 per acre for fertilizer. Each subsequent feeding of our fields costs well over \$2000. For both economic and cultural reasons soil tests and green tissue tests are run before each feeding and the fertilizer necessary to maintain a proper balance is applied. Sometimes this amounts to a combination of one or more basic simples. Other times, we use commercially-mixed brands, usually having additional chemicals added to meet our requirements. The tonnage we order permits a special run, and often we order extra magnesium, etc.

At least once each year we apply a feeding of LIQUINOX which is a very high quality liquid fertilizer compounded with Yucca extract. The Yucca extract has the advantage of supplying organic trace elements, and the amount used in this fertilizer is a large percentage of the total mixture. Too, it has a secondary advantage, as it also acts as a soil detergent or wetting agent. Oddly, in our industry it is not uncommon to see advertising that heralds a grower as using only "organic" fertilizer. This is highly in error because such growers usually use only one fertilizer that is either a fish or blood slurry heavily fortified with chemical fertilizers.

ROUTING YOUR ORDER. Few customers realize the importance of proper routing of their order and the effort that is made to insure space on the best available planes. As we are in the Los Angeles area we contact all airlines we plan to ship by each day for "Perishable Protection" and reserved space. Flying Tiger Airlines automatically reserves so much space for us and phones each day to check the amount we will need. With other airlines we have regularly reserved space on advantageous flights or make special reservations. This insures against backlogging or shipping into areas where it is known in advance that the airport is closed because of fog, snow, or flooding.

VISITORS ARE WELCOME. We are closed only on Sunday. We welcome visits by any grower and will be pleased to show you around. While 85 acres of geraniums spread through a large farming area loses some of the appearance of size, there are, never-the-less, approximately 500 miles of rows if placed end to end — equaling the distance from Minneapolis to Indianapolis. Our rooted cutting beds have a capacity of well over one and a half million cuttings.

We, and customers who have visited us, feel that to see and know something of the geranium field growing is a definite help in understanding the advantages and problems of the industry. We see many growers every year or every other year, and some as often as four times a year.

TO VISIT US. We are approximately 12 miles south of the Los Angeles City Hall, which we can see from our offices. Come out any freeway or boulevard to the intersection of Highway 14, (Artesia Blvd.) and Wilmington Avenue. Then travel south on Wilmington Avenue for 1.1 miles, or until you are 750 feet south of the Dominguez Water Co., water tanks, where a paved road leads east (our sign is at the corner). Take this road east, (to the left when coming from Artesia



Mrs. Fred A. Bode, Sr.



Betty Bode

Blvd.) for one half mile to the Long Beach Water Co. tanks at the end of the road. Our headquarters will be just to the right. We will be glad to see you.

CALIFORNIA GERANIUMS. The last catalog, printed 3 years ago, mentioned that it was rather ridiculous that there were those who felt there might be diseases in California that were not just as common in eastern greenhouses. The California industry has never actively fought this criticism mainly because our industry has grown faster than we could afford to finance new fields. Finally, during the last season, several fine articles were written by university men and other authorities recognizing California stock as the going thing; critical to be sure, as we ourselves are, but certainly recognizing the economic value of California stock as well as the early blooming and robust nature of the stock.

It appeared last year that all growers wanted to receive California cuttings and the demand was far more than the supply. There probably will never be enough geranium stock to supply the demand during the rush season again. Just as growers in the East are concerned with which greenhouse operator they place orders — those same growers should be just as careful in buying California stock. Since 1945, there have been more than 100 geranium concerns started in California, and today only about 15 are in the business.

HY-GRADE PROPAGATING STOCK

Because we have a large rooted cutting business we do not have to refrigerate or use hot air dryers. When the cuttings are damp with dew, our men cut for callused or rooted orders, which go in the sand immediately. When the dew is gone, unrooted orders are cut. Wilting that occurs when dew-laden cuttings are cut is avoided, especially the severe de-hydration which accompanies dew-laden cuttings and hot air drying. After the unrooted orders are packed for the day, the cutting crews work in the fields or take more cuttings for the sand. **We never refrigerate. We never take cuttings one day for the next day's orders. All orders of unrooted, callused, and rooted cuttings are cut, wrapped and shipped the same day.**

Today many growers are advertising that their plants are grown from Southern California propagating stock, particularly to the retail trade. If you do, be sure that the stock you buy is the best stock available — BODE'S HY-GRADE PROPAGATING STOCK from SOUTHERN CALIFORNIA GERANIUM GARDENS — geraniums you can be proud to sell.

Cultural Notes

NOTE: Very little change has been made in these cultural notes. They are brief and to the point, and based upon twenty year's experience. We suggest that you follow these recommendations; then, if you are still in doubt, please write us and, at the same time, include a teaspoonful of soil taken from about half-way down the soil ball of the plant. Wrap the soil in a little cellophane to prevent moisture loss.

GERANIUMS IN GENERAL. Botanically known as *Pelargonium hortorum*, regular garden geraniums are generally called zonal geraniums, or zonals, in the trade. Mainly they are the offspring of two South African species, with other species bred in to a lesser extent. These plants are native to an area where the climate and growing conditions are no less than ideal, but two hundred or more years of breeding have brought many changes.

Varieties listed in this catalog are not difficult to grow. Any variance with common culture is noted with the description. If you are a geranium specialist offering many varieties, your operation is diverse enough so that differences of culture are no problem. If you grow a basic selection for the bedding plant trade, with a minimum of labor, be sure your choice of varieties is suitable for your area. Pink Barney is a fine, compact pot-plant for the Pacific Northwest. Yet, in the warm dry weather of Texas, it soon suffers from the heavy watering necessary. Jean Viaud or Pink Phenomenal would be a better choice in Texas while, conversely, they would draw up in the dark spring of Seattle.

As geraniums are large-leaved, herbaceous plants, they naturally grow fast and take a great deal of food, water, and light. Years ago when greenhouses and labor were cheap, geranium cuttings were taken when the beds were pulled out to plant fall bulbs. These cuttings, and later pots, were grown slowly. Fertilizers were poor and incomplete, and a great deal of damage to the plants was caused by an over-supply of a few chemicals and the complete lack of others. The old adage, which to some degree still persists, "Starve them, and grow them dry," causes a great deal of trouble and loss today. The reason for growing cool, hungry, and dry years ago was so that the plant would be forced to grow slowly and the roots would have time to search out sufficient trace elements to survive.

Today, greenhouses are kept warmer and geraniums are grown faster. Under warmer conditions, the plants transpire more water and must be fed more often in order to keep the nutrient solutions properly balanced. Failure to follow this procedure causes the most common trouble we encounter in greenhouses—the complete lack of nitrogen, with stem-rot as the result.

CUTTING PROPAGATION. Any recognized rooting medium may be used for geraniums. We use washed plaster sand and change it after each time, never chancing contamination. No



Pedro Romero (l) takes care of this field and discusses, with pride, the crop for which he is responsible with Fred Bode III (c) and a propagating helper.

medium should be tamped. Merely fill the bed, flat, or pot; check for weak places around the edges, and water down well.

Cuttings should not be damaged by being forced into the medium. In our own practice, we use a short piece of plaster lath which is rounded on one end, then sharpened along one edge and the rounded end like a knife. With this lath a slot is made in the sand a little deeper than the cuttings will be planted. Now the cuttings can be planted about $1\frac{1}{8}$ inches deep in the slot, without forcing.

Cuttings should be recut straight across, just below an eye (leaf node). Actually under ideal conditions, geraniums will root just as well, and with more roots, when cut about halfway between the nodes. However, there is far more chance of disease entering the soft center area, and growers rooting more than a million cuttings a year, including ourselves, find that the cost of recutting the ends is well repaid. Any leaves which appear to be in good enough condition to remain will help get the cutting started, and they should be left on.

Cuttings that turn black from the base upward to about the level of the sand and appear OK above the sand are usually the victims of a rooting powder which is too strong. "Off the shelf" brands of rooting powder are usually four or five times too strong for geraniums and may be satisfactorily diluted with about four parts of cheap talcum powder to one part of rooting powder. However, extra-mild rooting powders are formulated with mild-acting chemicals and should be used when possible. Geranium stems are hairy, and excess powder should be tapped off with the hand. Never dip geranium cuttings in water before powdering. The geranium trade in general uses CUTSTART 1X powder for all geraniums. Pelargoniums prefer CUTSTART $\frac{1}{2}$ X. Disease can be practically eliminated by adding from 10 to 15% of PARZATE to the rooting powder. (See page 47 for Cutstart Rooting Powder.)

After recutting the ends, allow the cuttings to dry only long enough to be free of actual juices—15 minutes to 2 hours, not a day or more as was once practiced. Powder the ends and plant in the sand; then water well until the sand is smooth. This will compact the sand for proper water content and allow proper aeration. At the same time, the water will activate the rooting powder and freshen the cuttings. Follow-up waterings should be made only when the sand is beginning to change color at the cutting-end level. Cuttings must not become dehydrated, but roots will appear faster if they have to "go out and get water". Tight, wet sand accounts for many unnecessary losses.

For faster root action, especially if rooting powders are used, a bottom heat of 65 degrees should be maintained, with a top heat of 50 to 55 degrees. Cuttings should be striking and ready to pot in 10 to 20 days, depending upon weather, heat, and amount of roots desired. Rooted cuttings can be potted into 3-inch pots; but many growers, especially those growing the heavier-calibered varieties, pot our rooted cuttings directly into 4-inch pots.

It is also very practical to pot unrooted cuttings directly into good potting soil. In this case, potting soil should be sterilized, and be sure to add from 10 to 15% of PARZATE to the rooting powder. If no rooting powder is used, then dip the entire cutting into a PARZATE solution (one level teaspoon per gallon of water) before potting.

SOILS. Geraniums are grown in almost every type of soil. However, the most successful commercial growers prefer a fibrous friable loam, as free of clay as possible, adding up to 50% German or Canadian peatmoss, depending upon the humus content of the soil and the weather conditions in the grower's area—the dryer the weather, the more peatmoss. To each cubic yard mixture, add 10 lbs. of dolomite, 5 lbs. of superphosphate, and 7 to 10 lbs. of a good, "complete", organic base fertilizer, with an analysis of about 10-10-5. The analysis is not too important, as long as it is an organic base. If, like commercial Vigoro, the analysis is a little higher, the lesser amount (7 lbs.) can be used.

Dolomite supplies calcium and magnesium, both important to geraniums, and offsets the low pH of the peatmoss, Superphosphate supplies phosphorus and contains most of the trace elements in minor quantities; and it should be added to the potting soil, as it is difficult to get a good supply of phosphorus to the roots once the plant is potted. Some growers prefer to use bonemeal, which may be substituted for the superphosphate. The organic fertilizer will supply organic nitrates and, in the case of most soils, ample potash. If the soil is naturally deficient in potash, the addition of a pound of sulphate of potash will help.

Leafmold is a good source of organic food. However, if it is used, be sure to watch the nitrate level, as the leafmold will "burn" nitrates as it decomposes. Leafmold will also continue to form acids, lowering the pH. The use of calcium nitrate solution will offset both troubles.

Some growers use dairy manure in their soils. It has a good pH factor for geraniums, but be careful that it is well-rotted and thoroughly mixed into the soil, as it is not uncommon to find single plants throughout a fine looking batch of 2½- or 3-inch-pot geraniums dying from the base upward. Upon inspection, it will be found that a small lump of manure, still giving off ammonia gas, will be the cause of the lost plants.

STARVATION. All food chemicals should be present in proper proportion, and the absence of any one will cause a form of chlorosis or show some other sign of deficiency. The lack of nitrogen and a pH below 5.5 are the two worst offenders. Plants starved of nitrogen look poor for a while then become diseased and die. How quickly this happens depends upon diseases present. A pH below 5.5 causes geraniums to stop taking in phosphorus; the entire plant wilts and drops its leaves; use 2 oz. of Dolomite or 1 oz. lime to 1 gallon of water to correct the pH condition, or 2 oz. of calcium nitrate if the nitrogen is also low. Cuttings taken from plants low in nitrates will often root almost 100%, but the percentage of survival depends upon just how low the nitrogen level is. Cuttings of low nitrogen plants die before or after rooting from the base upward in long black streaks. The actual death of the cuttings is from induced stem rot.

INTERMITTENT FEEDINGS. Many geraniums are potted and grown with little or no feeding. This is a gross error, because the soil area of a pot is only a fraction of the soil that the roots would search for food if growing in the ground. Many modern growers feed every 5 to 6 waterings, lightly but regularly—consistently throughout the year.

It is difficult to lay down a set rule for feeding as all soils vary in content and leaching quality. There are many good, easily understood books on feeding plants; however, a few specific recommendations for geraniums will be made here.

Geraniums are lime-loving plants, and sufficient calcium should be in the soil to maintain a pH of 6.5 to 7.5. However, certain soils known to contain enough lime for good geranium growth may go as low as 5.5 with no trouble. On the other hand, a lime-poor soil might easily test 6.5 due to sodiums or other high pH chemicals, and still need lime (calcium) which is, in addition, a soil conditioner.

Calcium Nitrate is an excellent nitrogen feed for winter application. It needs no bacterial conversion, as do the organic or ammonia-type fertilizers. It also tends to hold up the pH, supplies added calcium and, like gypsum, tends to keep the soil open to air and generally more friable. It is soluble and can be used as a liquid feed (1 oz. to 1 gallon of water). We prefer this feed to Urea (½ oz. to 1 gallon water) but sometimes switch off.

Another chemical that geraniums use in fair quantity is magnesium. Most fertilizers do not contain enough, or it is in a form that leaches quickly. This is the reason we recommend dolomitic lime (dolomite), which contains about 37% magnesium and 60% lime. It is a quarried product and was in popular use until it became too scarce for agricultural purposes. Now, Kaiser Aluminum Co., Berkeley, Calif., manufactures dolomite as a by-product, and it is again available at reasonable prices. However, most of the agricultural dolomite sold in the East is still quarried. Dolomite is a mild-acting material which can be used in reasonable amounts without fear of burning or causing an upset. USUALLY YOUR FARM ADVISOR, COUNTY FARM AGENT, OR AGRICULTURAL COMMISSIONER can tell you where to obtain dolomite.

If dolomite cannot be found in your area, agricultural lime, hydrated lime, gypsum (gypsum will not change your pH and is good to use where natural pH is already high) or other forms of calcium may be used. Some growers prefer to use ground shell (in much larger quantity). If ordinary lime is used, we recommend adding 2 lbs. of magnesium sulfate to each 100 lbs. of dry fertilizer, if you feed with dry fertilizer; or one teaspoon to the gallon

of properly diluted liquid feed—unless the formula of either type already contains at least 1% magnesium. For the grower with a limited need, magnesium sulphate need not be bought by the 100 lbs., but can be obtained as a cheap bath-grade of Epsom salts at any drug store.

URAMITE and BORDEN'S 38 are organic-type nitrogen fertilizers similar to Urea, except that they are captive and will not dissipate rapidly. Growers waited years for these fertilizers which can be added to the soil and which become available throughout the pot life of the plant, or at least for a period of about six months. Various reports have shown that different results have been experienced by growers using these fertilizers. While some growers have experience burning, we have seen excellent results with other batches. Using Uramite seems to need a transition of growing practice, just as was necessary when growers started using plastic and aluminum pots. When aluminum pots were first used many severe losses were suffered because growers did not eliminate soils with clay, and loss was due to lack of air circulation because of the clay sealing over the top surface of the soil. In the case of Uramite and Borden's 38 it is advisable to avoid wide divergence of wet and dry conditions. This seems to break down the fertilizer more rapidly and cause burn. Or, at least with a high nitrogen level, dry conditions will cause the water-chemical solution to be extremely rich. A light, well aerated soil with a high humus content should be used with these fertilizers.

Our first recommendation was based upon the successful growing by Irvin Bowerman, grower at Sachs Floral, Topeka, Kansas, and the quantity of Uramite was 13 ounces to each 4 cubic feet of soil mix (commercial wheelbarrow). While the manufacturing company says this will not burn, it has been found that six ounces is sufficient and, of course, will give less chance of burning.

LIGHT. Full light should be given to all Geraniums and Pelargoniums during cold weather. Give up to half shade during the summer. Dirty or shaded glass causes plants to "draw-up".

HEAT. Most geraniums are grown between 50 and 65 degrees, with 50-degree houses run a little dryer and fed a little less than the warmer house. However, usually the warmer grown, well fed and watered plants produce the greatest profits because of the quicker crop. Salmon and pink varieties must be bloomed at over 50-degree minimums; otherwise the color pigments will flood to the center of the florets, leaving the edges pale or streaked. Pelargoniums stand cooler night temperatures, and 40-degree minimums do not slow growth appreciably.

AIR. Plenty of air is very desirable. An occasional thorough airing during the winter is of great advantage.

WATER. The commonest cause of plant loss is disease or debility, encouraged by over- or under-watering. Geraniums should be well soaked, and then allowed to become reasonably dry, but not arid, before watering again. Geraniums are herbaceous plants and use lots of water during periods of heavy growth, such as late spring; but they can go for long periods in winter without being watered. When an abundance of water is used the plant must be fed, so that the water will carry ample food chemicals. Otherwise, the plant becomes waterlogged.

SYRINGING. Growers have always avoided syringing because of the danger of spreading bacterial stem rot, botrytus (grey mold) and other fungi. However, Parzate, or its equivalents, Dithane Z-14 or Z-78, will control or discourage these troubles and, being reasonably clean, may be used freely on plants and house. In cool weather, houses should be sprayed once each month; and during periods of high heat, once a week is not too often. If kept clean with Parzate, plants may be syringed during hot weather, thereby cutting down on pot watering.

PINCHING. Southern California cuttings are strong and heavy calipered. We have found that experienced users of Southern California Geraniums prefer our 4- to 6-inch cuttings because of their more profitable returns. For example, after the cutting has been potted and about an inch of growth made, a "hard pinch" should be made. This means, cut the tip out of the cutting for a length of about two inches. Then the grower has a short cutting which has not required stock-bed space, yet will make a good late plant, cutting his stock costs considerably. The prime reason for the "hard pinch" is that the hormones (auxins), which control growth and keep the side eyes dormant, are manufactured in the growing tip. To nip out only the uppermost tip will merely cause the plant to make new growth from the uppermost eye. By removing all wood which is still in a state of elongation, one removes all of the hormone producing area. Thus the chemical which controls root growth and keeps the side eyes dormant is removed, and all side eyes become active. Then growth is made until the side branches themselves produce sufficient hormones to again check growth.

PESTS. Geraniums, being large-leaf herbaceous plants, are enjoyed by about as many pests as any other plant of its class. However no pest is hard to control with today's fine pesticides. By watching for early signs, usually they can all be eradicated with a single



Silvester Barba, patriarch of the Barba family, many of whom have worked for us for several years, talks with his son, Al Barba (r), our general field foreman. They stand in our six acres of Ivy-leaved Geraniums.

treatment. Often the knowledge of their presence will permit the use of several chemicals in one spraying.

Snails should not be tolerated. They are prime spreaders of bacterial stem-rot and, if any exists in the greenhouse, they spread it rapidly.

Caterpillars do not bring diseases of geraniums, but do damage the plants. In our own fields, the plants are dusted weekly to protect them from the worms of moths and butterflies. Few, if any, of these pests originate in the fields, but come in on the wind. Our shipping girls inspect every cutting to avoid the possibility of shipping egg clusters. However, there is always the chance for a cluster to get by, and these eggs will hatch enroute. Therefore, we certainly recommend dusting all California stock as soon as it is in the pot or sand — DDT is entirely satisfactory for this purpose. Also, most caterpillars that will feed on geraniums are those of night flying moths and, when stock is started during the late summer or early spring when ventilators are open during the night, worms will in many cases originate in the grower's own greenhouses and should be watched for.

Red-spider and other spidermites are the worst enemies of geraniums, and just a slight infestation will do considerable damage to a crop. For this pest we recommend the organic phosphates in all forms. We use Systox, Kelthane, Parathion, Toxaphene, Aramite, etc, changing almost every application to avoid buildups of resistant mites.

Many greenhouses suffer infestations of aphids and leafhoppers during a growing season. A few will do little damage, but their multiplication is so rapid that, if not controlled immediately, they will cause severe virus infection. Unfortunately, this virus does not always show up immediately and the supplier of the stock is blamed for poor or diseased cuttings. Do not permit aphids to become a problem. They are too easy to control.

White-Fly and thrips are sometimes troublesome, and heavy infestations will do considerable damage. The proper greenhouse bombs or DDT will control both these pests.

NOTE: Geraniums will tolerate 5% DDT dust applied properly or mild DDT sprays, but severe dwarfing results from constant use or heavy applications. The organic phosphates, such as Vapophos, Vapotone, etc., have no ill effects.

As far as we know, it is not known why there is a red-spider build-up when DDT is used. Unless the greenhouse is absolutely free of red-spider, be sure to use a miticide along with the DDT.

THE DISEASES OF GERANIUMS were pretty well described more than a hundred years ago, yet the geranium constantly improves, with most stock considered "disease free." What is really meant by "disease free" stock is that the plants have been grown for several generations under healthy conditions, and diseases now remain latent. However, if the plants are grown under poor conditions, trouble soon appears, for plants are quite like humans in this respect: let our health run down and one of the viruses we all carry takes over in short order. Thus, active disease is almost always the end result, not the initial cause of death. So,

we find that **the major problem of geranium growing is to understand the geranium and meet its few requirements, so that trouble may be avoided before diseases like bacterial stem-rot, virus etc., strike the final blow. One of our major Midwestern universities advises that disease becomes of little importance when plants are properly grown. It is the best cultural advice we know.**

VIRUS. There are quite a number of minor viruses which can be seen occasionally, but practically all are of no economic importance. These include relatively rare types; such as "Measles" which is so often seen in pictures accompanying articles on virus simply because it is an interesting form and easily photographed.

The damaging form of virus which is economically important in the so-called "January Virus" which appears commonly during the colder winter months. This virus is spread by aphids and leafhoppers, and it originates as easily in the greenhouse as in the fields. The more careful growers in the California industry spray or dust regularly enough to avoid infestation. In our own operation inferior plants are always removed immediately. And, we run severe roguing programs in which every plant with off-color foliage, below standard flowers, dwarfed appearance, etc., is removed during the period when virus is most likely to show (February). During the lighter shipping season of April through July, alternate fields are run quite dry for 6- to 8-week periods. This will show up any other plants of low quality, and they in turn are removed. Thus, we supply large quantities of high quality stock to greenhouse growers who bench their own plants and to other California field growers who do not care to carry out such a project.

For many years virus was considered to be a submicroscopic animal, too small to be seen. It is now known that virus is a "wild" protein in which a slightly different chemical or molecular structure accounts for the abnormal characteristics produced by infected plants. This certainly is much more reasonable than the old theory.

Some very good authorities believe that all mutations are caused by viruses and that all viruses are not crippling. And, it is quite logical that variegated forms and mutations, such as serrated flower petals, are the responsibility of virus. We know that mutations, such as Fiat, are more subject to the simple viruses than original seedling varieties. And, that mutations of mutations, such as Fiat Enchantress, are even more subject to virus. Following this through, we know that we cannot build such varieties as the beautiful Fiat Queen, with its serrated flower petals, into field-hardy strains. Very soon after starting to select field-hardy strains of Fiat Queen, Princess Fiat, or Royal Fiat, we end up with the plain petal forms. Also, now that we have quite hardy strains of Fiat Enchantress we get many more reverts to Fiat. In the case of Fiat we are constantly getting a larger percentage of Gorgeous. Thus, it shows that in reselecting the mutations, which are invariably more dwarf than the parent, we select forms which are less infected by or more resistant to the virus originally responsible for the mutation. And, it could very well be that virus causes all "degenerate form" mutations and periclinal chimeras.

The responsible California Field Growers know that there are fields that have not been rogued, and cuttings for stock plants have been taken during periods when the disease is not visible. This is most actively discouraged because most of the larger field growers are very interested in delivering high quality stock to the greenhouse grower. Good stock of varieties subject to virus should show no more than a token number, 10 to 20 per 1000, of diseased plants.

CRINKLES. At one time this disease was quite prevalent in Radio Red, Pride of Camden, and other of the thin-stemmed varieties. In fact, during the late 1930's these varieties were about ready to go off of the market because of their several diseases, mainly "crinkles" which showed up in entire branches with crinkly leaves and deformed tips. This disease has been practically eliminated and all varieties subject to this disease are comparative leaders now.

FUNGUS. The fungus diseases sometimes give considerable trouble. Generally where fungus strikes, the greenhouse is not favorable to geraniums. Geraniums must have ample air circulation, and where good circulation is possible there is seldom any trouble. Sometimes, in areas such as Portland, Oregon, and Seattle, Washington, the weather is so damp that fungus is a problem and botrytus does serious damage if not controlled.

In the case of a fungus attack try to give more air to the house — even if it amounts to installing fans. For cure, spray the greenhouse with Parzate or any other fungicide manufactured under the dithane patents. In some areas (Texas) very good results have been had with Manzate, (not a dithane-type fungicide). However, be careful of the fungicide used. Some of the finest fungicides will cause metallic poisoning in geraniums.

BACTERIAL STEM-ROT. This disease in active form is not a problem in the Dominguez Hills' fields. The growers in this area are well aware that low nitrogen encourages this disease and that snails and slugs spread the disease rapidly. Hence, fields are fed and kept entirely free of snails and slugs. The bacteria associated with the term "Bacterial Stem-rot" is prevalent in all parts of the country and it is very likely that the latent pathogen is present in practically all geraniums. However, field-grown stock that comes from fields

where there is no active bacterial stem-rot normally will not develop the disease under the more favorable greenhouse conditions. The rot that follows the death of tissue, due to overwatering or other damaging cultural troubles, is a normal decomposition of plant tissue. Low nitrogen levels in warm greenhouses can result in active stem-rot, and stock shipped from fields where active stem-rot is present will result in the loss of plants at the slightest provocation.

TREATMENT: Plants that show virus should be discarded, although plants suffering from "January virus" will generally develop new and normal foliage as the spring weather approaches. According to experiments at UCLA and other universities, there is no cure for any geranium disease and even the antibiotics in sufficient strength to do any good will result in severe plant damage (plants turn white). The best guarantee against disease is to start with carefully selected stock and practice the most favorable growing methods.

WARNING: 90% of what appears to be bacterial stem-rot (usually the natural decomposition of plant tissue) is simply due to some bad cultural condition. Before submitting to the idea of disease, review the cultural necessities of geraniums and, nine chances out of ten, the problem can be solved.

EDEMA. This is one of the most common, and obvious, troubles of geraniums. It is not the killer that conditions of being grown too wet or too dry are, but it is a cause of unsightliness; and it does encourage customers to suspect that the plants are not as healthy as they should be. This is in no way a disease (pathological). It is entirely a growing problem and, with full understanding, very easy to overcome. Rather than rewrite our own description of edema we are reprinting one of the most understandable descriptions we have found:

Symptoms - Edema, is a non-parasitic condition associated with excessive soil moisture and retarded transpiration. Water-soaked spots, which later become brown and corky, develop on the leaves. The leaves turn yellow and drop off. Corky ridges may develop on the petioles and stems. Edema is likely to develop when the soil is moist and warm and the air is moist and cool. This results in rapid water absorption from the soil and slow water loss from the leaves. The resulting over-turgid condition of the leaves results in the bursting of some cells, followed by the development of the corky swelling. The trouble is usually most severe in late winter during cloudy weather.

Control - If plants are given plenty of air and light, without too much water, edema does not become a problem. Affected plants usually recover with good growing conditions or when set out-of-doors.

J. L. Forsberg

Illinois State Florists' Assoc. Bulletin

Number 173 May-June, 1957

SPECIFIC RECOMMENDATIONS. All geraniums can be affected by edema. The most common problem is that of ivy-leaved geraniums in hanging baskets. Give all the light and air possible. Do not spray the plants in hanging baskets as this cools the plants and causes further loss of transpiration. Use a copper tube with a valve between the tube and hose to water baskets or hanging containers. Fill the basket then let it drain thoroughly. Do not permit it to become too dry before rewatering.

Zonal geraniums are often affected by edema when the pots are set on a wet, spongy bench covering such as peat. The moisture rising from the wet peat deters proper transpiration, and moisture can be seen gathering on the leaves, particularly on the underside. Grow geraniums on bare benches. If the boards of the bench bottoms are warped, or the grower feels he must have something under the pots, then use pea-gravel.

Check the temperature of the soil in your pots. If the heating coils are too close to the bench bottoms, there may be a considerable difference between the temperature of the soil and the general greenhouse temperature. In this case use pea-gravel under the pots; or better yet, place a buffer between the coils and the bench bottom. Usually, in the case of wooden benches, it is only necessary to put building paper on the framework of the underside of the bench.

THANK YOU

We sincerely thank William E. Schmidt, Holmes C. Miller, and Howard Kerrigan for their personal help in checking dates, hybridizers, and varieties, as well as Clara and Harry P. May and Charlotte M. Hoak, and many, many others whom we would like to mention, for pertinent facts and the use of old catalogs. Thus, because of their expert help the information in this catalog reflects far more than our past 20 years of growing experience with and research on well over 1,000 varieties.

Shipping Methods

Generally speaking, only two methods of shipment are now recommended: (1) Parcel post with special handling or even better, with special delivery, for the smaller order, (2) Airfreight for orders over 1000 cuttings. Airmail or airexpress is quite expensive for geraniums although both are sometimes used. Railway Express has curtailed operations so severely that many areas are undependable.

PARCEL POST

For most shipments other than airfreight, we recommend parcel post with special handling or special delivery. Although there is no guarantee against anything except being lost or extreme damage, we have shipped thousands of orders by parcel post during winter months and have had only 4 frozen arrivals.

Parcel Post, with special delivery or special handling, is highly dependable. Shipments to Philadelphia sent special delivery reach the consignee in 72 to 73 hours. Off-line cities in that area would require additional transfer time.

Also, in the case of post office box addresses it can usually be arranged to have the post office phone you when the shipment arrives. The post office is under no obligation to do this but, when requested in advance, postal employees are unusually cooperative in the case of live plants.

We make most parcel post shipments on Friday so they are in transit over the week-end and arrive on Monday or Tuesday. Thus, there is no chance of week-end delay. Shipments within the fifth postal zone are usually made early in the week as they require less traveling time and are delayed if shipped on Friday, unless they go to an off-line town.

SPECIAL HANDLING dispatches shipments with the same schedules as first class mail. It allows the use of special "OUTSIDE MAIL" stickers so packages are individually handled and not placed in mail bags. Traveling as first class mail, packages are carried in mail sorting cars which are cooled or heated in extreme weather. **All parcel post shipments made by us include special handling.**

SPECIAL DELIVERY includes the services of special handling. In addition, it insures delivery within 1½ hours if the addressee is within the special delivery zone.

NOTE: Customers are often told by post offices that special delivery to addresses not in special delivery areas will not speed up delivery. This is in error. According to postal regulations, insured packages cannot be left at mail boxes. Instead a notice to contact the post office for the shipment is left. When special delivery is used the rural carrier will deliver the shipment to the customer's door (on his regular route schedule), if the customer is within one-half mile of the mailbox.

PARCEL POST TO CANADA. Because some delay is necessary in clearing customs, parcel post should be used only for very small shipments where airfreight is quite impracticable — and then only to British Columbia. Parcel post to Canada cannot be COD'd. Order value and postage should accompany order. If parcel post is desired, request a Canadian Plant Importation Address Label (1 for each 400 cuttings) with your request for a plant importation number. The special label is a **MUST** for parcel post shipments.

POSTAL PAYMENT. Postage varies so greatly with location, variety, and seasonal packing that the postage schedules we formerly used proved quite inaccurate. Postage will be prepaid if you will include an additional ½ cent per cutting for west of the Mississippi River, or an additional 1 cent per cutting if you are east of the Mississippi River. Any difference will be billed or refunded.

AIRFREIGHT

AIRFREIGHT. We ship by all airlines and place the shipment with the flight most advantageous to the customer. We are in direct phone contact with all airlines and contact or are contacted daily by the lines. We will ship about 140 tons (approximately \$40,000 in freight charges) this year by airfreight. This, along with the airlines' consideration for perishables, allows us many favors such as being invited to use the jets (at the usual low rates) and reserving space for special flights. We have excellent relations with all airlines.

All airfreight shipments are sent collect. Many growers request airfreight and the stock sent C.O.D. The C.O.D. fee is very nominal and the entire cost of the order may be covered with one check and entry.

Many cities have "Nursery Stock" commodity rates of 30% to 50% less than the best rates. Commodity rates are special prices for 100 lbs.; these rates apply if only one airline is involved, or one airline and ground service (Railway Express, etc.).

Scheduled airlines have a minimum of 50 lbs. and are considered economical for all shipments of 1000 or more cuttings (35-37 lbs.). Full value of commodity rates (100 lbs.) is earned on orders of about 3000 cuttings, and shipment becomes cheaper than Railway Express. At present, Flying Tiger has a \$4.00 minimum for 12 to 20 lbs., depending on distance. International rates are suprisingly low. 500 rooted cuttings to Guatemala are shipped by air for a total of \$5.87. International minimum rates are based on about 8 pounds.

AIRFREIGHT RATES. The following sample air freight rates are those for a few cities served directly by airlines. Off-line cities requiring forwarding by rail or truck, or by a second airline, have additional charges for the service necessary. It is most highly recommended that whenever possible the consignee should plan to drive to the airport to personally pick up his shipment. This prevents considerable delay as it is often the next day before trucks make deliveries. However, in many cases where it is too far or not practical to pick up the shipment at the destination airport, we can arrange satisfactory forwarding by companies that specialize in forwarding from airports.

NOTE: Do not send money for freight charges. Airfreight is shipped cartage collect.

Sample Airfreight Rates

From Los Angeles to:	*1 lb.	**50 lbs.	100 lbs.	From Los Angeles to:	*1 lb.	** 50 lbs.	100 lbs.
Boston, Mass.	\$.33	\$.33	\$16.95	Oklahoma City, Okla.		.18	14.30
Chicago, Ill.	.22	.22	11.60	Philadelphia, Pa.	.31	.31	15.60
Cincinnati, Ohio	.23	.23	12.80	Phoenix, Arizona		.09	5.80
Dallas, Texas	.20	.20	14.50	Portland, Oregon		.13	9.60
Detroit, Mich.	.26	.26	13.15	Richmond, Va.		.31	29.23
Hartford, Conn.		.34	27.35	Seattle, Wash.		.15	11.90
Indianapolis, Ind.	.24	.24	12.05	St. Louis, Mo.	.21	.21	10.95
Memphis, Tenn.		.22	21.04	Washington, D. C.	.31	.31	14.95
Miami, Fla.		.36	29.35	*Under 100 pound rates in cents per pound.			
Milwaukee, Wis.	.23	.23	11.60	**50 lb. minimum applies where no per pound price is quoted.			
New York, N. Y.	.31	.31	15.95				

NOTE: These are commodity rates (1 airline) or compound airline rates (2 airlines). However, in many cases, we are now able to route through "joint rates". For example: The rate by American Airlines from Los Angeles to Toronto via New York is \$24.55. By routing the shipment to Chicago by American Airlines (or other airlines) and forwarding to Toronto by Trans-Canada Airlines, we are able to effect a "joint rate" of Los Angeles to Chicago (\$11.60) plus Chicago to Toronto (\$6.00) for a total of \$17.60. This is not possible to all cities, but it is becoming more frequent. (Rates change slightly with periodic adjustments.)

Terms of Sale

Stock offered in this catalog is available the year around, except when orders exceed the supply. Orders booked in advance are shipped in rotation, but on the date specified if possible. Orders accepted are subject to cancellation or adjustment in case of crop failure and other conditions beyond our control.

NAMES ARE TRUE according to the description in this catalog and are based on more than 20 years of diligent research. In case of error or misunderstanding, we will be responsible only to the extent of replacing the original shipment.

MINIMUM ORDER MUST TOTAL 100 CUTTINGS—No order will be accepted for less than 50 unrooted cuttings—or 25 rooted—of any one variety. Special collections of 10 each of 10 kinds (our choice) are offered and, if possible, we will cooperate when the customer wishes certain varieties included or omitted.

PRICES ARE SUBJECT TO CHANGE WITHOUT NOTICE. Prices listed in this catalog cancel all other quotations. Stock reserved at higher quotations will be properly adjusted.

It may be noted that many varieties have lower prices this year. It has always been our policy to bring all stock prices toward a common standard as quickly as stock is available or strains are rugged enough to warrant lowering prices. Our purpose is to make it highly practical for the greenhouse grower to get his stock from us rather than to waste time, space, and money producing his own.

Naturally, it is more efficient to cut several thousand cuttings of one kind and to process them in such quantities. Thus, we pass along these savings in the quoted prices. At the same time we appreciate the business of the smaller growers, and the prices quoted for smaller quantities are based upon actual handling costs.

WE DO NO OPEN ACCOUNT BUSINESS—Terms are cash with order, or permission to ship C.O.D. The narrow margin on our type of horticultural farming does not permit carrying accounts, etc. This is our own rule and is no reflection on anyone's credit. No discounts can be offered as prices are highly competitive. The larger the order, the more difficult it becomes to protect the customer on short items.

CENTRAL AMERICA, SOUTH AMERICA, AND OVERSEAS CUSTOMERS. We make many shipments to all countries in the Americas, and every year supply propagating stock to numerous growers overseas, especially in Australia, Japan, England, Palestine, Italy, and South Africa. We are glad to accomodate growers in any country either for production or propagating quantities. We make out all papers necessary for shipment and are in the Los Angeles area where we are handy to all Counsuls if papers need certifying. No charge is made for paper work. Pan American Airlines keeps us informed on all regulation changes. However, to avoid chance recent changes we suggest that you send any special information necessary. We will prepay any shipments if funds are sent with order; otherwise, shipments are made cartage collect.

NOTE: We make no attempt to publish a new catalog every year, but only as varieties and business require one. If you have ordered from us within the past two years, you are on our mailing list and will receive all of our mailings. (Published September, 1959.)

Preferred Varieties

In the last catalog we published lists of the favorite varieties for each section of the country. The varieties had been reasonably stable for several years. Such a list was made up for this catalog, but according to advance bookings, last years' favorites will be a poor reflection of this years'. So, we have included with all descriptions any pertinent information about the individual variety. For instance, in the white zonals the descriptions will tell you that Snowball is the big favorite in the South and gaining much popularity in the North; these are the real facts. Madonna will tell you that it is the leader and the best for Michigan and other Great Lakes States. Also, the introduction to the white zonals will give you some idea of comparative popularities.

The important change is the industry-wide acceptance of the "Irenes": Irene, Dark Red Irene, Penny, Genie, Springtime, Salmon Irene, and the Irene-like varieties such as Fashion, Neon Fiat, and Red Meteor. It can now be predicted safely that more than half of all geraniums sold this coming year will be the Irene Group. Last year Irene was the hands-down favorite, and Dark Red Irene was the second most popular geranium.

There was no place where Dark Red Irene predominated, but it was popular in every area as the first, low-growing, very dark red. Perhaps it would have been the number one geranium in the Chicago area had there been enough stock available in standard sized cuttings. However, all growers who were able to nearly meet the demand were forced to ship somewhat undersized cuttings. We have large plantings of Dark Red Irene and plan to ship at least half a million this season.

What we consider a fluke is the popularity of Pink Cloud. Fortunately, we have large plantings of this variety and should have no trouble filling all orders. We have supplied quite a number of the other growers with selected stock and it appears that most of them did not count on the strength of the advertising this variety has received. We do feel responsible to our customers and want to be sure that all understand just what the variety is. This variety was produced at Ames College, Ames, Iowa, in an effort to develop a heat-resistant, summer variety. It is an almost-rank grower, hardy, free blooming, and one that rates a place in the trade as a variety to start late for rapid, short-crop plants. It is the answer for the growers who want to get more stock ready; say after Easter. The flowers are large, and there is no doubt that it is a free-bloomer and a very hardy plant.

NOTE: Pink Cloud is being ordered as a substitute for Fiat Enchantress, and this is an error. The color is much darker in the greenhouse, and it is doubtful if this clear pink, greenhouse color will be accepted as a substitute for light salmon-pink by the retail trade if the customers really want Fiat Enchantress. In the garden the flowers become streaked with the first hot weather and, while the garden color is more like Fiat Enchantress, the streaking is not attractive. We have ample stock — far more than any other source. Just don't overestimate the variety unless you know it is good in your area.

PACIFIC NORTHWEST. (66% red colors) A heavy interest in all of the Irenes and, of course, the finer singles are very popular (National, Fire, John Forbes, Mrs. E. G. Hill, etc.) The demand for geraniums is growing steadily due to housing expansion, and undoubtedly there will be another shortage of geraniums this coming season (unless the winter is an open one). The big interest is in the Ivy-leaved Geraniums.

EAST WASHINGTON AND ALL DESERT STATES. (56% red colors) The Irenes have become more popular, just as they have everywhere, but the remarkable increase has been in the popularity of Always and Festival.

CHICAGO AND NORTHWARD. (over 70% red) Irene was already the leader in this area 2 years ago. Improved Ricard almost equals Irene; and when Improved Ricard is combined with the almost identical Red Landry, they must surpass it. In between the six most popular reds are two very popular, large selling pinks, Fiat Enchantress (10%) and Improved Lawrence (8%), and a salmon, Mme Landry (7%). Dark Red Irene, Better Times, and Radio Red (ABC Red is gaining) are the three other really popular reds.

QUEBEC, NEW ENGLAND, NEW YORK, AND NEW JERSEY. This area is unique, because, up to last season, two varieties stood out as supreme favorites: Olympic Red sold 434 for every 229 Improved Ricard as compared with 55 Beaute Poitevine, 46 Irene, 42 Red Landry, 40 Fiat Enchantress, 23 Picardy, and so on through the varieties. This last season Irene moved up and shared the limelight with Olympic Red and Improved Ricard. This season it appears that it will double the sales of either one.

The new Conquistador, with its Better Times plant, will take some of the demand off of Dark Red Irene, which does not make as pretty a plant as do the other Irenes.

HAWAII and ALASKA. While winter conditions vary considerably in these two states, the varieties grown are the more rugged, fast growing kinds. We have supplied geraniums to Alaska for many years. The interest in Hawaii has been developing rapidly, and some nurseries produce good quantities now. Like Florida, geraniums in Hawaii must be well fed during the rainy season. Of special interest to Hawaiian Nurserymen are the new Airfreight rates that are as low as 30 cents per pound.

COLORADO, NEBRASKA, KANSAS, and OKLAHOMA. (57% red) The four leaders are Irene, Red Landry, Fiat Enchantress, and Better Times, all about equal. They account for more than half of all geraniums sold. Some of the finest geraniums grown are produced in these states.

IOWA, MISSOURI, ARKANSAS. (58% red) 25% of the geraniums grown in this area are Red Landry; with increasing interest in the Irene, but still the area of lowest demand for Irene. Only slightly less demand for Fiat Enchantress than in the above area.

OHIO, VIRGINIA, INDIANA. (43% red) Practically all geraniums do well in this area, and Irene first became popular here. So many varieties are popular that the top favorites hold only a small percentage: Irene 9%; Picardy 8%, Better Times, Red Fiat, Mme. Landry, Penny, Snowball, Fiat Enchantress, and Radio Red, all about 6% each. In this area only, Picardy sells double the amount of either Palmier's Salmon Supreme or Salmon Irene.

SOUTHERN STATES. (40% red, 40% salmon, 20% white and pink) All varieties that are listed as hardy are popular in the South. A great deal of interest, especially in Florida, leaves a large market unsupplied. The lack of sufficient feeding causes most of the stock produced in Florida to look poor. Georgia, Alabama, and the other Southern States raise beautiful geraniums because they have been a regular crop for many years. In tropical areas singles and semidoubles are best.

Zonal Geraniums

(Pelargonium hortorum)

The following list contains practically all of the varieties grown in quantity by pot plant florists. Large acreages are planted in the expected sale's ratio. Varieties are not only true to name, but every effort is made to produce the best strains of each variety.

ZONAL GERANIUMS: PRICE GROUP 1 (See page 48)

(Except as otherwise noted with variety)

METHOD OF READING DESCRIPTIONS

JEAN OBERLE (Buxton) — (Bruant 1906). Jean Oberle is the correct or most accepted name in the United States. Buxton is an accepted synonym. Bruant was the hybridizer, and 1906 shows the year the variety was originated or first marketed. Occasionally, the correct name is given as the synonym because it is seldom used in the United States — thus, we list Intensity, not the original name Entinzelant. But, in varieties not too well known by the American name we use the correct name — thus, we list Rycroft White, the original name, and not Alaska, a name which has been used for three different varieties.

The hybridizer and date (Bruant 1906) show us that Jean Oberle was of French origin and that it has been a trade favorite for many years. Modern hybridizers and dates of introduction are quite correct. In the case of varieties 50 to 100 years old, great care has been used to not list varieties and dates unless they have been carefully checked. However, some varieties are clouded as to who was the hybridizer and who the introducer — and, if the earliest date was that of the seedling year or the year of introduction.

NOTE: Unrooted cuttings can be shipped anywhere by airfreight. We do not recommend shipping unrooted cuttings beyond the 5th zone via Parcel Post.

DOUBLE — SEMIDOUBLE White

Only about 5% of all zonal geraniums sold are white. This is partly because the brightly colored geraniums are so eye-appealing, and partly because not enough growers stock the white varieties. In fact, many people who might buy white geraniums, actually do not know that they exist. Although most large growers figure about 10% for the white geraniums, the smaller growers in small cities frequently fail to handle this color at all.

Snowball, which accounts for 40% of all white geraniums sold, and Mme. Buchner (24%) remain the favorites, with Madonna (13%) a strong third. Snowball and Mme. Buchner are used throughout the country, while Madonna is the favorite in the northern states, such as Michigan. Although it is a very early bloomer, Madonna is not used in the southern states because the flowers become small in the brighter light of the South. Verite (10%) is a slightly smoother-leaved variety, almost identical to Mme. Buchner, that is quite popular on the Eastern Seaboard.

Two other whites gained in popularity in the past two years. Gregersen's White (3%) was once tried by many growers, but it has now become most popular in areas where semi-double, Fiat-type flowers are better liked than the doubles. At the same time, White Magic (10%) has come up from nothing to an important white. Fraicheur is a novelty-type that is prized by the hobbyists and specialists, but it is not a volume variety.

SUMMER CLOUD—(Miller 1956) A really good, semidouble white. The flowers are large and pure white. Sometimes the buds show pink before they open, adding to the beauty of the flower. The low, quite compact, fast plant makes it the best late season pot plant of any white. Foliage is excellent and soft textured. This could well prove to be Mr. Miller's best contribution to the trade.

WHITE MAGIC—(Miller 1950) Very large, beautifully formed, snow white double flowers that appear faintly green under artificial light, lending to their beauty. Similar to other Miller hybrids, the plant is compact, bushy, and strong if grown under good culture. Drought and spidermite will cause the loss of the lower leaves. Without a doubt, the most beautiful white.

MADONNA — (Rozain Boucharlat 1900) Large, pure white double flowers in the North, although flowers tend to become smaller in the Southern States. Very early bloomer. Never shows tinge of red. Plant is about the size of Mme. Buchner, but has smaller wood and wavy foliage.

NOTE: While Madonna has been listed as synonymous with Mme. Buchner, the two are entirely different.

GREGENSEN'S WHITE—(Gregersen 1947) Free flowering, large semidouble white. Lower growing than most white varieties and very hardy.

NOTE: Cuttings of this variety usually drop all leaves, but come out rapidly without loss of growth. This is quite characteristic.

RYECROFT WHITE (Alaska) — (Jones 1890) Large paper white semidouble flowers similar to Gregersen's White, but with looser umbels. Of medium habit, the plant is very good. An excellent choice where cool wet conditions cause flowers to mold, and where an especially rugged plant is desired.

COLORS: To make the selection of colors easier, each color group shades from the lightest variety at the beginning of the list to the darkest variety at the end.

Light to Medium Pink

This group has a number of old-time favorites. Pink Giant and Irvington Beauty are the only varieties of real volume — with the exception of Penny, which outsells any half a dozen of this color group. However, Berthe de Presilly, Springfield Shell Pink, California Beauty, Pink Barney, Edna, and Pink Abundance are also important varieties.

JEAN OBERLE (Buxton)—(Bruant 1906) Early, free-flowering, light pink double, shading to a darker center.

BERTHE DE PRESILLY—(Bruant 1887) Large trusses of clear light pink double flowers, shading to white center. Fairly large, fast, compact plant. Leading light pink.

MARIA WILKES—(Rober 1941) Identical with Berthe de Presilly in every way, but the color is slightly pinker.

REVERIE—(Miller 1946) Large-flowered, light orchid-pink double. Very free-blooming, rapid plant. Very popular.

SPRINGFIELD SHELL PINK—(To U.S.A. by Good & Reese 1941) Strong, compact grower with a profusion of medium-sized double flowers. One of the most prolific bloomers. An excellent pot plant.

WHITE FRILLS—(Schmidt 1959) A sport of the popular Noel, White Frills does not have the cactus-flowered petals that twist and turn, but the larger, pure white, double flowers appear quite frilly. We have grown this variety for three seasons and find the plant very dependable. We are introducing this new novelty zonal to you for Mr. Schmidt.

White Frills: Price Group 2

SNOWBALL—(Probably introduced into U. S. before 1901 as Hermine) Once considered a southern variety, this excellent white double is still gaining in popularity, now surpassing Mme. Buchner with which it is almost identical. However, both plant and flower of Snowball are larger and the leaves are nearly round; leaves of Mme. Buchner have well defined scallops.

MME. BUCHNER—(Before 1901) Beautiful, pure white double flowers make this a leading white. In most areas this fine, early bloomer can be depended upon for Easter sales.

VERITÉ (Springfield White)—(To U.S.A. by Good & Reese 1941) Clean, beautiful white double that does especially well on the East Coast. Plant is similar to Mme. Buchner, but the foliage is brighter green. The name, meaning truth, probably alludes to its habit of remaining pure white.

GARDENIA—(Miller 1949) Very free-blooming, satiny white double, varying from pure white to faint blush. Compact, bushy plant is excellent for pot culture.

FRAICHEUR (Canadian Pink and White)—Moderately tall, free-flowering plant with double white flowers that are nicely margined with soft red. A novelty.

PINK CLOUD—(Dr. E. C. Voltz, Iowa State College 1955) A large-flowered double of clear, true pink. Plant is similar to, and only slightly larger than, Irvington Beauty. Hybridized to withstand the intense summer heat of the Midwest, it was first disseminated as Hawkeye Pink Cloud. Popular with all growers who prefer a fast, rugged, free-blooming plant. Particularly valuable late in the season or whenever time is short as it will make a finished plant in the shortest possible time. (See note on page 13.)

NOTE: Pink Cloud has the same tendency toward "crook neck" as Olympic Red and Irvington Beauty. This is caused by the plants becoming dry while the buds are forming. Unlike Olympic Red, Pink Cloud is not touchy to water and the plants should not be allowed to become dry or nearly dry.

Rose Pink to Deep Rose

OLD ROSE—(Miller 1946) Soft tone of old rose, quite double. Medium-sized flowers on a semidwarf plant. Flowers freely.

CALIFORNIA BEAUTY — (Schultz 1928) Known in Europe since 1905 as Dagata, this beautiful semidouble to double has large trusses of light rose-pink flowers with white centers. An excellent bloomer, it is fine for both pot and garden.

FRANCES PERKINS (Miss F. Perkins) — (Before 1900) Light rose-pink double with white center. Almost identical with California Beauty, but the flowers stand higher above the foliage and the leaves are a brighter green.

CALIFORNIA GIANT — Rose - pink semidouble, almost identical with Pink Giant, but a full shade lighter. A heavy-wooded, strong, beautiful variety.

JEAN VIAUD—(Bruant 1891) Semidouble, lavender-pink with white center. The color is almost the same as the California Giant, the flower nearly as large. Blooms later than many in this group, but a very strong, heat-resistant plant. Especially good for the Midwest.

GENIE (Genie Irene) — This semidouble sport of Irene is bright rose-pink with a white eye, about the same color as Pink Giant; but the plant is much more dense and free blooming. Although the original stock that we received had a tendency to bloom down in the plant, we have had several sports of Genie appear in our plantings of Irene and we now have a strain that blooms well above the foliage. Genie promises to become the favorite in this color group, just as the other Irene's have in their respective groups.

PINK GIANT—Enormous semidouble flowers of rose-pink with white eye. Foliage is soft grayish-green. Stocky, low-growing plant. One of the finest, most popular strong pinks.

PINK PHENOMENAL (Phenomenal Pink)— Rose - pink semidouble. Almost identical with Pink Giant, but has a slightly larger plant. Choice is strictly personal preference.

PINK BARNEY (Mme. Barney) — (Before 1911) Deep rose-pink double with white center. Compact plant has soft, wavy foliage. Makes an excellent pot plant when pinched well. Very early bloomer. Does not stand the heat too well, but is a favorite in the North.

EDNA (Pink Better Times)—(McAdams abt. 1950) Brilliant dark rose-pink double with white center. A sport of Better Times, with a typical Better Times plant. Very profuse bloomer and popular.

DEBONAIR — (Miller 1952) Orchid - pink with a little white in the center. The large, semidouble flowers are more showy than most orchid varieties. Moderately low, compact plant has nice, pubescent foliage. Makes an excellent pot plant and a fine garden plant.

ORCHID QUEEN — Strong - growing, semidouble orchid with white center. Very late.

ORCHID PRINCESS — (Richards 1957) Double, large-flowered pink with white center. Although it apparently flowers orchid in Seattle where it was hybridized, in our warmer climate it flowers a clear rich pink with white eye. While Orchid Princess is a rampant grower, it remains quite compact and blooms freely.

GLAMOUR — (abt. 1954) Soft fuchsia-pink sport of Better Times and a beautiful color. Slow-growing plant, but very compact.

SILVERADO — A strong, moderately tall, but full and bushy plant. Rose-pink double with a decided bluish cast. The flowers are of moderate size, usually four inches across on young plants, and smaller as the plant matures. It is exceptionally free blooming all summer and can stand considerable heat and cold. A good desert variety.

GALLI CURCI—(Rober abt. 1945) A beautiful cerise-rose, similar to Edna but bluer. One of the Better Times group, probably a sport, as the plant and flower are identical with Better Times. A truly beautiful flower in the greenhouse.

IRVINGTON BEAUTY (Rose Pink Fiat)— (Before 1930) Large trusses of soft rosy-salmon, semidouble flowers. Low-branching plant with pubescent foliage makes an excellent pot. Very showy, heavy bloomer. An East Coast favorite.

PENNY (Penny Irene) — Semidouble neon-pink. This luminescent, deep bluish-pink member of the Irene group has become one of the top selling geraniums, and the leader in this group. Actually, Penny has created a whole new market for itself, because it has not hurt the sales of Irvington Beauty at all in spite of being the closest color. A typical Irene plant, Penny is just as strong and free blooming.

MRS. RICHARD GLOEDE (Thomas Meehan, Los Angeles Beauty)—Large, rosy-salmon double flowers on a splendid plant. Makes a very fine bedder anywhere.

AMERICAN BEAUTY — (abt. 1930) Beautiful, clear rosy-red double that is well described by its name. Large trusses on a very free-flowering plant.

PINK ABUNDANCE—Double, exceptionally large, deep reddish-pink flowers on a large, fast plant. Very free bloomer.

MONSIEUR EMILE DAVID—(Bruant 1906) Large bluish-rose double with white center. Strong plant. Popular old-time variety. Regarded as the "bluest" geranium.

SPECIAL ZONAL OFFER

A good selection for your area.
10 each of 10 kinds (our choice). Rooted.
Price Group 1 (Page 48)

Salmon-pink Shades

Geraniums in this group of soft-toned varieties are almost all leaders. Fiat Enchantress, Pink Fiat, and Magnificent are in this class. While not one of the top ten, Mme. Jaulin is a perennial favorite; and the newer varieties such as Always, Springtime, and Festival really have a following now.

INSPIRATION—(Miller 1949) Very free-flowering semidouble. Cream flushed with pale salmon. Rapid plant has soft-appearing pubescent foliage. Flower is best described as a pale appleblossom-pink version of Irene.

ALWAYS—(Miller 1948) Huge, creamy white double flowers, softly flushed with shrimp-pink. One of Miller's most beautiful hybrids and a superb pot plant. This is becoming a top florists' variety.

JOY—(Miller 1948) Very similar to Always, although the flower heads are not quite so large and the color is brighter. The large, creamy white, double florets are flushed with a delicate shade of apricot-salmon. Plant is of medium size, strong and compact. A fabulous bloomer.

MME. JAULIN (Apple Blossom)—(Bruant 1894) Large trusses of salmon-pink semidouble florets, shading to soft cream on the outer edges. Its hardiness and abundance of bloom make it one of the leaders in this color range. For pot and bedding.

FIAT ENCHANTRESS—Soft salmon-pink semidouble with beautiful, soft green foliage on a self-branching plant. Although too delicate for rugged outdoor planting, Fiat Enchantress makes one of the most beautiful pot plants in the greenhouse and does give customer satisfaction when used in window boxes, porch planters, and properly maintained gardens.

NOTE: Last year was not a good year for this variety although we did have by far the largest plantings in the industry, and the stock was far above the average. This year has been ideal for growing. We have over 50,000 stock plants of Fiat Enchantress which is far more than has ever been grown before even by us.

We have visited many greenhouses growing our stock and find that the average number of virused plants appearing in our stock of this virus-prone variety is from 10 to 20 per 1000.

While beautiful as Fiat Enchantress may be, we do not recommend that it be grown unless the grower can devote more care to it than is usually given to the general run of geraniums. Fiat Enchantress must be guarded against overwatering, both in the sand and in pots. The soil should be light and friable; one which will not seal over or become scummy on top. Feedings should be regular but light. One grower in Oklahoma City who retails Fiat Enchantress (2000) at \$2 per 4-inch pot has gorgeous stock and loses almost none.

SPRINGTIME (Springtime Irene)—Double, beautiful shade of pinkish-salmon. An Irene-type plant but even more compact. While a few growers have not found this new variety to their liking (probably because of overblooming) others have found it so satisfactory that they are growing this as their light pink.

LA FRANCE—Very double, medium-sized florets of light salmon-pink. Trusses shade from light edges to darker in the center, creating a lovely two-toned effect. Very hardy.

MAGNIFICENT—(Bode 1955) Enormous semidouble flowers of rich light salmon-pink, slightly brighter than Fiat Enchantress. It is without a doubt one of the largest-flowered geraniums to date. Old florets disappear beneath younger ones so that the center of the flower is fresh until all buds have opened, creating a flower of exceptional lasting quality. Magnificent is a healthy variety, but requires more water and food than most varieties.

NOTE: Because we have to give special attention to Magnificent in the form of more frequent waterings and feedings and often disbud them to prevent overblooming we find it necessary to make a slight additional charge

Magnificent: Price Group 2

BOUNTIFUL—(Bode 1952) Soft coral-salmon double flowers during cool weather, and salmon-pink during hot. This Landry and La France cross is especially hardy, and is an excellent bedder in areas of adverse conditions.

TEDDY ROOSEVELT (Improved Lawrence)—Semidouble, medium-sized, shrimp-pink flowers. Excellent pot and bedder. Foliage is light green without zone. Plant is medium sized, compact, small wooded, and free flowering. Popular in the Pacific Northwest and around the Great Lakes. It is the color of this variety that makes it so popular, otherwise there are much more satisfactory varieties.

DREAMS—(Miller 1942) Large double flowers of clear salmon-pink stand well above the foliage. Fast-growing plant.

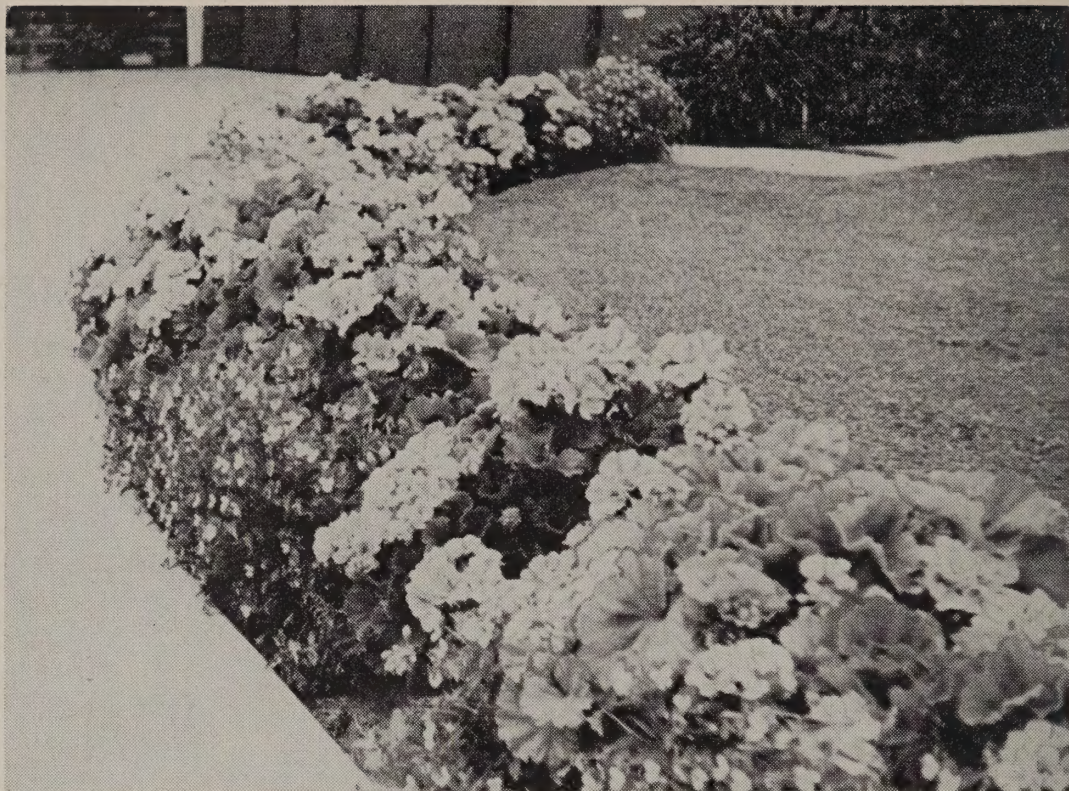
GORGEOUS (Avalon Beauty and many other names)—A light coral-pink revert, rather than a sport, of Fiat. The plant has the same foliage as Fiat, but is considerably taller, which is not appreciated by some growers. In hot dry areas where Fiat is too delicate, Gorgeous will make better growth. The color is lighter than Fiat.

NOTE: This revert appears in the ratio of about 1 to 200 plants grown. So many growers have thought they found a new sport when in truth the original variety has gone out of the trade several times. The original name is not known in this country, but the first record of re-introduction is by Schultz in 1921 as Pink Fiat, a name which later became attached to Fiat to differentiate it from Red Fiat. Now the best known name is Gorgeous, introduced by Frank Miller, Burlington, Wisconsin in 1931.

FIAT SUPREME—(Summers 1942) A light coral-pink sport of Fiat, about midway between Fiat and Fiat Enchantress in color. Fiat Supreme is quite slow growing, but makes one of the most beautiful geraniums grown. A real favorite in the Pacific Northwest.

Fiat Supreme: Price Group 2

NOTE: We have now succeeded in developing a very satisfactory strain of this beautiful variety and have an excellent supply. Fiat Supreme will now become a leading, soft salmon.



Springtime Irene along the driveway of our home. No more compact plant or free-blooming variety can be found. The large, soft salmon-pink blossoms are greatly admired.

FIAT (Pink Fiat)—(Bruant 1908) Listed in 1908 as an orange-salmon with copper tint. Seventh in popularity of all zonals, Fiat is a brilliant salmon-pink semidouble that blooms profusely. Soft-appearing pubescent foliage and a self-branching plant makes this a leader.

PINK SENSATION—(Wilson Brothers abt. 1941) Strong Mitchell's Sensation and Fiat cross. Rich, soft pinkish-salmon double. This variety will become much more popular as it becomes well known.

MONTEREY—(Lester 1938) Double, salmon-coral with white center. Very beautiful when well grown, but sometimes delicate under adverse conditions. A specialist's variety.

FESTIVAL—(Miller 1951) Very large, reddish-salmon double flowers that are borne on long strong stems. Very free-blooming. The strong plant is large and somewhat open as a pot plant and very beautiful.

WELCOME—(Miller 1950) Very large double flowers of brilliant, rich reddish-salmon on a fine pot or garden plant. Petals sometimes show a white reverse. There are few varieties than can beat Welcome for the number of blooms on a pot plant.

MAISIE—(Tonseth 1946) Semidouble. One of the most popular geraniums in the Portland, Oregon, area and now gaining favor in other parts of the country, especially in Ohio.

NOTE: This Helen Mitchell X Mrs. E. G. Hill hybrid is quite similar to Fiat in all respects, but the color is a little darker salmon and the flowers stand higher above the foliage. A picture in the Portland, OREGONIAN showed a six-inch pot of Maisie with some 22 large flower heads.

MRS. EASHAM (Mrs. Esham)—Grown side by side with Maisie, we can find no difference, except Maisie is the slightly better bloomer.

NOTE: Our stock came from Pekin Hill Greenhouses, Sanborn, New York, where the variety first appeared about the same time Maisie was introduced, but they have no actual history of the variety. It is very likely both varieties are the same.

NEON FIAT—Semidouble of rich dark salmon, overlaid with a bluish cast. This variety is very similar to Penny but the plant is more solid; the flowers have more body.

NOTE: In visiting greenhouses throughout the country it is difficult to know where to place Penny, Neon Fiat, and Fashion. In the early spring they are very similar, and in some localities they are all a beautiful rich salmon. In the garden, in most areas, Penny and Neon Fiat become salmon with a distinct bluish overcast during the summer, while Fashion becomes a medium cherry-red.

"They arrived in fine shape I disagree with anyone who says 'California grown geraniums are not good'."

Ohio Grower (490)

"We wish to thank you for your prompt attention and also to state that the cuttings arrived in fine condition and were extremely nice, healthy plants."

Washington Grower (1100)

"Evidently a lot of people besides myself get splendid results. I know of some old-timers at the business who lose 20 to 25% of their cuttings from other sources, and I have always rooted your stock more than 100%. Of course, this is possible with a few extra ones in each bundle. And, I am not an 'Old Timer' in the Geranium business either!"

Montana Grower (685A)

Salmon Shades

The salmon group contains a number of oldtime or "classic" favorites which are really important to the trade — Palmier's Salmon Supreme, Beaute Poitevine; Mme. Landry, and Salmon Ideal. Two newer varieties have come up very rapidly: Elizabeth Bode now equals Mme. Landry, and Salmon Irene equals Palmier's Salmon Supreme. All of these are important medium-sellers. The salmon shades account for 20% to 30% of the geraniums sold throughout the United States, except in the South where 50% are salmon. Mrs. E. G. Hill (See singles) is popular everywhere.

For best color all salmon, salmon-pink, and soft pink varieties should be bloomed in greenhouses with over 50-degree minimum temperatures. If colder, the color will flood to the center of the florets, causing a washed-out appearance. The reverse is true in extreme heat.

PALMIER'S SALMON SUPREME—Semidouble. Light clear salmon flowers on an excellent pot plant. Beautiful foliage with serrated edges. One of the leading varieties and a favorite with the wholesalers for their own 4-inch pot plants.

SALMON IRENE—Semidouble, similar in color to Palmier's Salmon Supreme. Not quite as robust as Irene, Penny, and Springtime but stronger than Dark Red Irene. An excellent and highly popular variety. Bookings for the 1959 season show that Salmon Irene will be the favorite for this color group.

PICARDY—Semidouble. Sometimes a little pinker, but otherwise almost identical with Palmier's Salmon Supreme. Large flowers on a hardy variety that makes a fine pot plant. Most popular on the East Coast.

BEAUTE POITEVINE—(Bruant 1887) Very large-flowered, soft pinkish-salmon semidouble. Very strong free-blooming plant. Gives plenty of satisfaction.

BODE'S SALMON SUPREME—(Bode 1953) Pinkish-salmon double. The medium-sized, irregular flowers are borne on a Salmon Supreme-type plant. A rugged grower, this variety should be used for adverse conditions where the finer-flowered salmons are not satisfactory.

MME. LANDRY (Wallingford Pink) — (Before 1901) Large-flowered semidouble of rich clear salmon. Many growers prefer Mme. Landry to Fiat because Landry does not shatter and its strong, dependable plant is one of the best sellers.

SALMON IDEAL—Identical with Mme. Landry, except for the very slightest of differences. Both are strains of the same variety and choice is strictly personal. We keep both varieties carefully separated.

SCARAMOUCHE—(Bruant 1908) Slightly larger in growth than Mme. Landry, but the semidouble flowers are almost identical. Grown in commercial quantities around Seattle, it is no longer known in most of the country. A good variety.

ENCHANTRESS (Not Fiat Enchantress) — Very strong-growing, bright pinkish-salmon double. Foliage well zoned. Makes an excellent pot or bedder for hot areas.

NOTE: Unless this variety is specifically requested, orders for Enchantress will be filled with Fiat Enchantress, as most growers think of Fiat Enchantress when they order Enchantress. Please mention "NOT FIAT" when ordering true Enchantress.

ELIZABETH BODE—(Bode 1954) Enormous heads of beautiful reddish-salmon double flowers. Every fine characteristic of Improved Ricard is present in Elizabeth Bode. Outsells Salmon Ideal by more than 2 to 1.

Apricot to Orange

Many fine orange-colored varieties have been developed, although few of them have become well known trade varieties, probably because most of them are quite delicate and subject to spider-mites.

LULLABY—(Schmidt 1947) Apricot-salmon or pale orange double flowers with light centers. Blooms freely and makes a beautiful garden plant if fed and watered well.

LAVE (Springfield Orange)—(To U.S.A. by Good & Reese, 1942) Clear medium-orange double. Listed by Bruant in 1902, this has attracted sales for many years. But, we feel that Miller's orange-colored varieties surpass this in every way.

CAMEO—(Case 1956) Very compact, moderately small-growing plant with an abundance of medium-sized cameo-pink double flowers that are about the same color as Lullaby, but softer in the center. Cameo makes a fine pot plant as well as an excellent small-sized garden plant.

Cameo: Price Group 2

GLORY—(Miller 1949) A truly beautiful, brilliant orange double. The small white center in each floret enhances the bright orange. The plant is hardy, compact, and stocky, with good foliage. The sales appeal of Glory is tops, and growers looking for a bright orange should add this one.

ORANGE RICARD—Semidouble. A bright, clear orange sport of Alphonse Ricard. Like most sports, it has a smaller plant than the parent which, in this case, is a distinct advantage. While more and more growers are finding Glory, Orange Ricard is also gaining more popularity. Mr. Stacey (Stacey's Greenhouses), Portland, Oregon, said this year, "If I could grow only one variety, I believe it would be Orange Ricard". This would be a pretty good choice.

NOTE: In all batches reverts number about 5%. Also, the pleasing orange color can be maintained by not over-fertilizing with nitrates at blooming time (High nitrogen tends to increase the red color factor).

RED GERANIUMS

After long cold winters everyone wants to see plenty of color, especially at geranium-buying time in the early spring. And red, the warmest of the colors, is by far the most popular. Red accounts for more than 50% of all geraniums sold. In Chicago, and northward the percentage of red runs to 70% or more; in the warmer Southern States it is 40%. The six most popular reds rank in the top seven positions. Only Fiat Enchantress (4th) breaks this group. In the order of their popularity, the top six red varieties are: Irene, Dark Red Irene, Improved Ricard, Olympic Red, Better Times, Red Landry—with a heavy mixture of the other reds among the rest of the leaders.

From an insignificant position in 1955 Irene rose to fifth place in '56, second place in '57, and first place in '58, with double the sales of its next closest rival. The number two geranium, Dark Red Irene, accounts for double the number three geranium. Thus, we find two newcomers far in the lead of Olympic Red, Improved Ricard, and Better Times, each of which was the top seller for some period during the last 10 years and each still accounts individually for five to ten times the average geranium.

The Irene's are not a fad. They earn every bit of their popularity and will remain leaders until better varieties replace them. They are fast growers, good plants, and constant bloomers. The flowers are double enough to have weight, but not so double as to be a problem in areas where flowers become moldy. Their universal appeal is what makes it possible for the Irene's to take such leadership. Olympic Red is still very popular on the Eastern Seaboard and Improved Ricard is popular on both coasts. Red Landry is practically identical with Improved Ricard but is called for by the Midwestern growers. Better Times, like Irene, has a universal appeal and about the same flower color, although darker, but a more dwarf plant.

Dark Red Irene was the first, bright dark red with a low-growing plant and constant-blooming habits. Anna Bluedorn, with a plant like Olympic Red but dark red flowers, became much more popular last year; and now Conquistador with its low, compact, Better Times-type plant will also cut into the sales of Dark Red Irene. The "Radios"—Radio Red, Avalon Red, ABC Red, and Scarlet Princess—were in short supply last year, otherwise each of them would have gained in popularity as the demand was extreme.

Orange Scarlet to Clear Dark Red

OLYMPIC MAID—(Bode 1958) Semidouble.

A light red sport of Olympic Red with the unusual advantage of having an even healthier and more beautiful plant than its parent. Well zoned foliage. The flowers are typical of Olympic Red, and the color is just a shade lighter than Improved Ricard and Red Landry. Growers who like Improved Ricard, but would prefer a variety with zoned and better foliage, should try this one.

IMPROVED RICARD—(abt. 1949) Very large semidouble, light brick-red or orange-scarlet flowers are borne on a good, solid, fairly compact plant that is excellent for pot or bedding. Very hardy and fast, but not tall. A top seller all during the 1950's, it now ranks 3rd.

RED LANDRY—(Bunch 1944) Listed in 1946 as a recent introduction and a red-flowering form of Mme. Landry, Red Landry is very popular and practically identical with Improved Ricard. It is reasonable, and we believe quite correct, to consider Improved Ricard to be a strain of Red Landry. However, Red Landry is generally preferred in the warm inland sections of the country. It has also become very popular in the Pacific Northwest.

NOTE: In selecting strains, California growers select the pubescent-leaved types of Improved Ricard and the smoother-leaved types of Red Landry. Both types appear in both varieties and must be carefully selected, or they would quickly become thoroughly mixed by natural mutation.

MICHELL'S SENSATION — Very large, semidouble flowers of brilliant scarlet. Much of the year it is difficult to tell from Olympic Red, but at other times the petals will show a light reverse. The plant is very well formed and strong.

SCARLET IRVINGTON—(Bode 1955) Clear scarlet semidouble. A profuse bloomer, being literally covered with beautiful brilliant scarlet flowers. This is a Coastal and Great Lakes variety; in the hotter parts of the country it is too single. The plant is typical of Irvington Beauty.

SCARLET CASTELANE — (Bode 1955) A beautiful scarlet sport of Marquise de Castelane, with the same double flowers. A good, but not rampant grower that is increasing in popularity.

ALPHONSE RICARD—(Bruant 1894) Fifteen years ago the old Alphonse Ricard was the leader in most areas. Like many varieties, it degenerated and, because it was also considered too tall, lost out as a trade variety of volume. In 1956, we acquired stock of a strain of Alphonse Ricard, selected by Homer Harkness & Son, Adrian, Michigan, which proved to be finer than any we have ever grown. It is free-blooming, semidouble, and has good color and nice foliage.

EL SEGUNDO BEAUTY—(Smith & Horne, abt. 1956) Red sport of Irvington Beauty which is slightly more double and darker than Scarlet Irvington. This is a good variety for either coast or the Great Lakes.

RED FIAT — Orange - scarlet semidouble flowers on a medium-sized plant. Free blooming in most cool areas, it should be avoided in Kansas and Missouri, and other Midwestern states, where it prefers to make growth and blooms late. Very popular in Ohio and eastward, and in the states that border Canada.

HELEN MICHELL — (Michell 1913) Beautiful large-flowered semidouble of orange-scarlet. Same color as Red Fiat. Larger plant than Red Fiat or Polly Red, with larger and rounder flowers than either. Helen Michell is grown all over the country: in the South because it will stand heat, and in the North because it is rapid and an early bloomer.

IMPROVED RED FIAT — Although this has been advertised as an improvement on Red Fiat, under identical growing conditions we find it to be the same as Helen Michell. However, we keep our original stock of Improved Red Fiat carefully separated for those who prefer this strain.

WYONA — (Fry) Very large, semidouble scarlet flowers, slightly darker than Red Fiat and Helen Michell. Good compact plant. We now have a selected strain that blooms early and profusely, and is one of the best reds. We recommend this over Polly Red.

OLYMPIC RED — Large trusses of clear bright medium-red. Our strain of Olympic Red is strong and healthy, with beautifully zoned foliage. It is much superior to the variety sold as Improved Olympic which was selected for strength alone without regard to earliness or amount of bloom, kind of foliage, or leaf zone. We shipped more than 300,000 Olympic Red last year, and growers who order such large quantities are not wrong.

NOTE: Olympic Red requires more water and food than most geraniums, and the condition of "crooked neck", in which the stems are crooked to the side just below the flower, is caused by a dry period while the buds are forming and, sometimes, by slight wilting during the bright spring weather, even though the plants are not dry.

DOUBLE DRYDEN — Beautiful, light clear red double with white center that accents the brightness of the red. Very free blooming. Makes a good pot plant. Now the only red with a conspicuous white center that we offer, but the best of a class that was at one time all the rage.

GALLANT — (Miller 1948) Scarlet semidouble. About the time this variety was originated, the Alphonse Ricard-type geraniums went out of vogue, and Gallant was overlooked by the trade. While definitely an Alphonse Ricard type, the improvement is considerable; and with a renewed demand for this kind of geranium, Gallant is sure to become a trade variety. The plant is moderately large, but not as coarse as Ricard. The flowers are about the same size, possibly larger, but formed by florets with very large petals.

SANDRA IRENE (Missouri, La Pilote) — Very free blooming, brilliant scarlet-red double with well-zoned foliage. Like many of the brighter reds, it will burn during hot spells; but an abundance of bloom replaces the damaged flowers immediately. Excellent for pots.

NOTE: Do not confuse this with the "Irene" group. It predates the Irene's by half a century. Until 1952, this variety was known as Missouri, a name it had had since the St. Louis Exposition. Before that it was the French variety, La Pilote.

IRENE (Bright Irene) — (Behringer abt. 1942) From 5th place in 1956 to 1st place last year shows that Irene has great sales appeal and grower satisfaction. Last year we grew over four acres of Irene, and were the only growers who did not run out. This year we will need more. The plant is rapid almost a rank grower, but not tall. The foliage does not show a good zone usually; but it is wavy, dark green, and velvety appearing, making a beautiful plant. The bright red, semidouble flowers have very large petals that sometimes shatter. However, because of customer demand, even growers who must truck their plants simply deliver when the flowers are less open. Then shattering becomes of little importance. Irene will continue to be the number one geranium until some similar but better variety, probably an Irene cross that does not shatter, comes on the market.

RED METEOR — (abt. 1956) This strain of Irene was enough different from the parent variety that the originator named it. Red Meteor is smaller wooded than Irene, but generally about the same plant. The outstanding thing is that it far outblossoms its parent, which is also an outstanding bloomer. We have ample stock of this Red Meteor and can supply any grower who would prefer it to Irene.

ABC RED — Identical with Radio Red, but the plant branches lower and more freely. This variety has gained considerable favor in the last three years.

RADIO RED — (abt. 1920) Velvety, brilliant red double. Very free-flowering. The small-wooded plant grows large and very rapidly. Radio Red is popular throughout the country, particularly late in the season when growers need a rapid plant, and it is close to being the leading geranium around Chicago.

AVALON RED — (Axelson 1953) Flower and plant of this sport of Radio Red grow about one-third larger than the parent. When we first offered this variety, it was very popular because it was hardy and dependable. Now, compared to Avalon Red, we sell more than twice as much Radio Red because it is so hardy, clean, and the smaller variety. This does not mean that Avalon Red is not popular and preferred in some areas. It is still a large volume variety.

COLORS: To make the selection of colors easier, each color group shades from the lightest variety at the beginning of the list to the darkest variety at the end.

SCARLET PRINCESS (Hasse's Scarlet, T.V. Red) — (Hasse, patent No. 875) Brilliant red, double flowers that are larger than either Avalon or Radio Red. The plant, also heavier wooded, should be heavily pinched while young. One severe pinching will produce a 4-inch pot plant with three or four nice branches. Makes an upright pot plant and a fine plant for the garden.

NOTE: Growers offering this as TV Red are attempting to avoid the patent restrictions. Our prices include the hybridizer's royalty and remove any responsibility from the greenhouse grower.

Scarlet Princess: Price Group 2

RED BARNEY—Clear, soft dark red double. Plant is compact and low, with wavy foliage. Since we have developed this healthy strain, Red Barney sells in the same quantities as Avalon Red. A beautiful pot plant.

ANNA BLUEDORN (Dark Olympic)—Beautiful dark red semidouble, similar to Olympic Red but much darker in color with more deeply zoned foliage. Although not a catchy name, it is coming to the fore in many areas, especially New England.

DARK RED IRENE—Semidouble, brilliant dark red, without crimson shading. This is now 2nd most popular geranium, even though the plant is not especially rugged. The extreme popularity of Dark Red Irene is due to its abundance of very large flowers and the fact that it was the first, really low-growing, brilliant dark red geranium.

Light Crimson to Dark Ruby Red

FASHION — (Bode 1958) Light cherry-red semidouble. Although Fashion is not one of the Irene's, it has the same strong plant as Penny and is even more free blooming. Re-orders on this new variety indicate that it will be a leader in the trade.

ROYAL TIMES — (Bode 1954) Soft crimson double, lighter in color than Better Times from which it sported, and darker than Pink Better Times. A typical Better Times plant. Very popular, especially where Better Times is a little too harsh in color.

LA JOLLA—(Bode 1959) This is one of the finest sports we have seen. The parent, Irene, is surpassed both in flower size and plant quality. Semidouble, medium-crimson-red flowers of excellent size. The plant has nice pot plant habits and the foliage is well zoned.

La Jolla: Price Group 2

NOTE: La Jolla (pronounced La Hoy' yah) is Portuguese for "The Jewel" and aptly describes the ruby color of the flower.

OUR NEW RED

CONQUISTADOR—(Bode 1959) A bright dark red sport of Better Times with the same flowers but no crimson tone (blue) whatever. The clear dark red color is equal to or darker than Dark Red Irene, the Radios, or S. A. Nutt. The flowers are not as large as Dark Red Irene, but they are more double and do not shatter. The plant is the compact, low-growing Better Times-type, with the same foliage and much superior to the plant of any other dark red.

Conquistador: Price Group 2

NOTE: Since writing the above description we have recently seen Conquistador grown under "greenhouse - spring - crop" conditions and we recognize it as one of the best additions the red color group has ever received. A well grown Conquistador is one of the most beautiful geraniums that can be found anywhere.

Many Better Times' sports have appeared, but all have been with the red lacking to one degree or another. For ten years we watched the flowers of Better Times for a clear red sport, and this amounted to many million flowers. In 1957, for some reason, five all-red sports appeared, all within about a month. Two of these had poor foliage and one was not a "fixed" sport. Of the two remaining, the one we offer as Conquistador has proved to be excellent. It does not revert, the plant and foliage are practically as good as the parent, and it is a free bloomer.

MARQUISE DE CASTELANE (Lady Jane)—(Before 1900) Big, round, double florets of rich crimson. Very robust plant is free flowering. Usually grown when a larger, faster plant with Better Times' color is wanted. Excellent for pot or garden.

NOTE: Although Marquise de Castelane is sometimes called My Beauty, we have grown both varieties and found them to be different. However, Marquise de Castelane and Lady Jane are the same.

BETTER TIMES—Rich crimson double with a splash of scarlet in the center of each floret. An exceptionally neat and compact plant, Better Times is a dependable bloomer, flowering all winter in many sections. Although Better Times dropped from 2nd place to 6th due to the increasing popularity of Irene, it still sells 5 times the quantity of most other popular reds.

RUBY KING (Ruby, New Ruby)—Very large double flowers of crimson-red, borne on long slender stems. Constantly in bloom. A rapid, superb bedder.

NOTE: Ruby King is most popular in Arkansas, Kentucky, and Tennessee, but it is also well liked in all areas where retailing is done from the greenhouse. Although flower stems do not break ordinarily, they will sometimes snap while being trucked.

PICTURED ON THE COVER

OLYMPIC MAID, a light red sport of Olympic, was introduced by us early in 1958. Large trusses on a full, bushy plant with well-zoned foliage make Olympic Maid even more attractive than Improved Ricard or Red Landry. And, it does not suffer from "crook-neck" nearly so much as Olympic. Although Olympic Maid was introduced without fanfare to wholesale growers, it has become very popular, particularly on the East Coast.

S. A. NUTT — (Before 1888) Large, flat, double florets of dark crimson-red form large trusses. The plant is as large as Camden, but with slightly heavier wood and rounder leaves with less pubescence. The flower heads, about the same size as Camden, are made up of fewer but larger florets. Practically the same color as Camden, its velvety sheen gives S. A. Nutt the appearance of being much darker. Very popular throughout the Midwest.

PRIDE OF CAMDEN (Camden Nutt) — Dark crimson-red double flowers on a tall, small-wooded plant. Earlier than S. A. Nutt, very free blooming, and one of the very best really dark reds. An excellent choice for where the season is short, and good in hot weather. (Arizona).

GYPSY — (Miller 1949) Medium-sized double florets of rich, dark wine-red with white centers. Medium plant. The unusual color is unique in geraniums.

Crimson Purple

This group contains some of the most beautiful geraniums, although they are not so easy to grow as the other colors. They tend to water-log rather quickly and drown if the soil is kept too wet. All of this group has smooth bark and foliage, and the entire group is more susceptible to spidermite than any other, except possibly the new orange shades. However, good culture and pest control will produce beautiful plants with gorgeous flowers that sell themselves.

MARQUISE DE MONTMORT (Suzanne) — (Before 1901) Fairly large, double flowers of purplish-crimson on a beautiful plant. Dark green foliage with fine zone. Very appealing to the retail customer.

DE QUIERELLE — Purple-crimson double with small white center. Almost identical with Marquise de Montmort in plant and flower, but the color is slightly darker and redder.

GALA — (Miller 1958) This double purple-crimson with a white eye has Bougainvillea (single) in its history, from which it gets its coloring. The flowers are abundant on a strong, compact plant. While Gala is too new to be well proved, we believe that it will be popular.

Gala: Price Group 2

MAGENTA RUBY — One of the Better Times family, with the same plant and flower. Large double florets of a beautiful shade of purple-crimson, with a splash of scarlet in the centers. Hardest of the "purples".

ROYAL PURPLE — (Richards 1958) Large double. Attractive purplish-red flowers with moderate white centers showing only in very hot weather. The plant is strong and fairly large. Definitely worth trying.

A. M. MAYNE (Springfield Violet, A. Magne) — (Bruant 1913) Enormous trusses of rich crimson-purple double florets. A fine, strong plant when properly fed. Should be pinched rather than have its growth checked by severe conditions. When well grown, this is one of the most beautiful of all.

SINGLE ZONALS

Single zonals are generally brighter colored and heavier bloomers than the doubles. They give full satisfaction in areas where doubles might mold because of damp weather. In Washington and British Columbia the singles cannot be surpassed. The singles are larger-flowering in desert areas during hot weather. They are popular in Arizona, New Mexico, and Texas; and they should be encouraged to the limit in these states. Florida has both of the above conditions, and single geraniums are popular there also, because they are often more hardy. They are also "self cleaning" and need much less picking of old flowers.

NOTE: Unrooted cuttings can be shipped anywhere by airfreight. We do not recommend shipping unrooted cuttings beyond the 5th zone via Parcel Post.

ALL SINGLE ZONALS: PRICE GROUP 1 (See page 48)

COLORS: To make the selection of colors easier, each color group shades from the lightest variety at the beginning of the list to the darkest variety at the end.

White

***MARGUERITE DE LAYRE** — (Bruant 1889) Large florets and umbels of pure white on a hardy plant of medium growth. This variety, and many newer seedlings, have been offered under many names, but generally the variations are so slight as to be only confusing. The strain we offer this year is probably the finest obtainable. One of the most beautiful geraniums grown.

CARMEL — White, with a well defined narrow margin of rose-red edging each petal. Carmel is a sport which is not "fixed". So, in spite of cutting only cuttings that are bearing a good Carmel flower, a high percentage revert toward Alice of Vincennes.

Pink

HELEN VAN PELT WILSON — (Rober 1945) Soft light pink with a little white in the center. Medium-large flowers on a strong free-blooming plant.

***GERTRUDE PEARSON** — (Before 1901) Strong rose-pink florets with white centers. Very large-flowered and free-blooming plant is very strong, with nice foliage. One of the most popular singles.

SPECIAL SINGLE ZONAL OFFER

We will send a good color selection.
10 each of 10 kinds (our choice). Rooted.
Price Group 1 (Page 48)

SINGLE ZONALS (Continued)

Coral Pink To Coral

ALICE LEMON — Soft light salmomy-coral, phlox-type florets with reddish-pink zone, shading to very light edges. Enormous flower heads are borne in profusion. Very beautiful but not too well known.

***GERTRUDE** — Soft coral-pink that is very attractive. Free-blooming, fine plant. Very popular in the Pacific Northwest. Unfortunately, there are many very inferior strains grown. The one we offer is the best of six good strains brought back from Washington.

***PINK HALL CAINE**—Beautiful bright coral-pink flowers on a plant that is fairly low. Although popular by this name in the Pacific Northwest, it is not a sport of Hall Caine but it is a sport of Gertrude.

Salmon

ELENORE E. ROBER—(Rober by 1942) Soft salmon, shading to a delicately tinted edge. Very robust plant. A beautiful variety.

DAWNFLUSH—(Miller 1941) Large umbels of round, flat florets. Soft salmon, deeper near center. Good plant. Blooms profusely.

HONEYMOON—(Schmidt 1941) Very large florets with white eye, surrounded by bright salmon zone, shading to palest blush at edges of petals. Strong bushy plant with handsome wide-zoned foliage. This Hall Caine—Maxime Kovelevski cross has replaced the taller Barbara Hope.

***MRS. E.G. HILL**—(Bruant 1901) Light salmon florets with two narrow upper petals and three overlapping lower petals. A favorite in all parts of the country, it is the outstanding single.

SUZANNE LEEPRE—(Bruant 1908) Larger-flowered than Hill, but about the same color, sometimes darker. This has a superb plant with well-zoned foliage.

DARK HILL—(Bode 1958) A sport of Mrs. E. G. Hill, the floret is the same enormous primitive type (two narrow petals up, three larger petals below) and the same fine plant. The flowers are dark, rich salmon with a clean, even tone.

Orange

ADVANCE—Beautiful pale orange. Medium-sized flowers. Free blooming plant.

***MARIE ANTOINETTE** — (Rober 1940) Delicate apricot-orange flowers profusely borne on a good plant. Visiting growers buy this variety on sight.

CUBA—(Schmidt 1946) Medium orange similar in every way to Maxime Kovalevski except lighter color. Often preferred because there is no brassiness to the color.

***MAXIME KOVALEVSKI (Diablo)**—Lemoine 1906) Brilliant clear orange. Low plant with unzoned foliage. Very free-flowering. A wonderful bedder, and a favorite for outdoor pots.

Crimson Pink to Crimson

***OLYMPIAD** — (Hummel 1955, Int.) Beautiful rich crimson-pink florets with large wavy petals. Very heavy bloomer. Compact medium-sized plant. This newer variety is a must with all growers once they have stocked it.

BEAUTY OF GLASSENWOOD (Beauty of Chatsworth, California)—Light cherry-red with small white eye. Large round flowers on compact plant. Dark foliage, good zone.

DARK CALIFORNIA — Rich cherry-red, a shade darker than Beauty of Glassenwood, with tiny white eye. Blooms freely.

***VELMA**—Extremely large flower heads of velvety garnet-red, often attaining a diameter of 6 inches on outdoor-grown plants. Attractive, good-sized plant is free flowering. Excellent desert variety.

***WILL ROGERS**—(Rober before 1946) Vivid purple-crimson, the darkest red in geraniums so far. Positively enormous flower clusters on a heavy-wooded plant. Soft gray-green foliage. Each floret has a splash of intense scarlet in the center that accents the deep crimson. Very popular.

GISH RED—Intense, dark velvet-red; probably as dark as Will Rogers, but less crimson. The umbels are of normal size, but appear larger because of the intense color.

BERKELEY RASPBERRY—(Jory before 1946) Dark soft crimson florets are of enormous size (2½ inches). The flower head is formed by five or six florets blooming at one time, with a good succession of buds replacing older flowers.

Scarlet

***PAUL CRAMPEL (Original French Strain)** —(Lemoine 1892) Large scarlet trusses carried close above bright green, nicely zoned foliage. The excellent plant is unusually compact, self-branching, and strong. A leading variety. Will respond to artificial light.

***PAUL CRAMPEL (California Strain)**—Color is identical with French-type Crampel, but flowers are larger and stand well above the foliage. Plant is also larger, but just as free-blooming. Many growers grow both. **NOTE:** California Crampel developed naturally during the 30's and early 40's when stock plants were grown from 4 to 6 years without replanting. Hardy seedlings coming up in the original plants slowly replaced the true variety. Such is not possible now, since few growers hold any zonal stock plants more than two years.

LA FIESTA—(Rober 1937) Large florets of vivid orange-scarlet. Low, free-flowering plant. Absolutely superb in the Pacific Northwest where 10-inch flower heads are not uncommon.

FLAME—(Rober 1938) Enormous scarlet florets make up large umbels. Very free blooming, fine plant.

HERRICK — (Before 1901) Intense scarlet. Very low-growing, compact plant.

***JOHN FORBES**—(Pfitzer 1898) Bright dark scarlet. A favorite with pot plant growers, especially in the Coastal and Great Lakes areas where individual growers raise as many as 5000. All the desert areas also grow John Forbes.

***NATIONAL**—This is undoubtedly the finest single for the Pacific Northwest, where really large quantities are grown. Being a favorite of both the coastal and desert sides of Washington, indicates that it should be popular anywhere.

FIRE — Another top-selling, dark scarlet single that we were able to reintroduce to the trade. One of the heaviest bloomers available. Very hardy, nicely shaped plants, and one of the finest bedders we have seen.

Magenta

***LADY RUTH (Wicked Lady)** — Brilliant magenta with a splash of scarlet at the base of the upper petals. Very free flowering. Popular everywhere, and especially in the desert areas.

NOTE: Lady Ruth is sold under many names in the U. S. However, it has been identified by both English and Australian visitors as Prince of Wales — or Rudyard Kipling, by which it has been known since before 1899.

SPECIAL PAINTED LADY OFFER

A good selection of these popular singles
10 each of 10 kinds (our choice). Rooted.
Price Group 1 (page 48)

PAINTED LADY VARIETIES

These popular, single geraniums are characterized by color shading toward white centers that vary in size with the variety. Once named Cyclops Geraniums, after the mythical one-eyed giant, today the trade knows them as Painted Lady Geraniums, adopted from the best known variety, Painted Lady.

RAMONA No. 2—Delicate light pink to white center. Compact plant. A terrific bloomer.

LADY OF SPAIN—(Schmidt 1947) Beautiful shade of soft coral-pink with white throat. Very large florets.

ALICE DE LA VERGNE (Alice de la Verne) — (Rober 1937) Light rose-pink to white center. Low plant. Dainty and beautiful.

NOTE: Vergne is Rober's spelling.

CHEERIO — (Miller 1950) Coral-salmon shading to white center. Young plants are often covered with flowers and it is probably the showiest variety in this group.

***SALMON QUEEN**—Brilliant orange-salmon with white center. Very striking flowers on an excellent plant. During the season of 1958 this variety sold double the amount of either Alice of Vincennes or Painted Lady, the previous favorites. This variety is sometimes offered as Painted Lady which, correctly, is entirely different.

***ALICE OF VINCENNES (many names)** — (Hill 1901) Bright red shading through light crimson to a white center. Good-sized flowers and a very dependable bloomer. Excellent for pots.

BERKELEY BELLE — (Jory before 1946) Light red to white center. Large, round, showy florets. Enormous blooms when well grown.

***LADY DRYDEN (Dryden)**—(Pearson before 1899) Scarlet shading to white. Free-flowering, medium plant. The most responsive geranium to artificial light.

***PAINTED LADY** — Cerise-red shading to white center. One of the favorites in this group. The plant is good, but must be cared for properly to be at its best.

ANN SOTHERN — (Rober 1940) Deep fuchsia-pink to white center. Free flowering unusual, and quite beautiful.

***BOUGAINVILLEA**—(Miller 1938) Beautiful purple-crimson with white center. This is Miller's finest and most popular single. Always premium-priced until this year. Now there is ample, fine stock.

***GENERAL LEONARD WOOD**—Rich crimson-red to white center. Strong and dependable. This was a top commercial variety in the late 30's but was dropped during the war years. We have had much call for this variety and again offer it.

GOOSEBERRY LEAVED

SANTA PAULA

FINGERBOWL



Unusual Geraniums

The novelties, or unusual geraniums, listed in this section are all zonal geraniums except as mentioned. A few are attractively odd mutations, but most are highly developed flower forms which took years of skilled hybridizing to develop.

We have collected these novelties over many years and, of necessity, had to start with plants that were "finicky". By constantly selecting the best, we have built up quite hardy strains; thus making the novelties much better known and more profitable items for the geranium trade.

Most are easy to grow and require the same culture as other zonals. Because of advanced flower development some varieties are slightly more touchy to overwatering and are less mite-resistant, but these are no problem under normal care in well run greenhouses.

UNUSUAL GERANIUMS: PRICE GROUP 2 (See page 48)

(Except Shirley Summers which is Price Group 3)

ROSEBUD GERANIUMS

Probably this group represents the highest form of geranium hybridizing. All varieties have good plants and the flowers are absolutely beautiful with a high degree of perfection in doubleness. Scarlet Rosebud is an outstanding novelty for beauty, and the florets are sometimes candied in simple-syrup for cake decorations. Appleblossom Rosebud is a top-selling florists' variety, even where no consideration is given to its novel form.

***APPLEBLOSSOM ROSEBUD** — White with petals edged rose. Very early flowering, strong plant. Flowers last a long time. The most popular of all novelties.

***PINK ROSEBUD**—Actually light rose-red, with the reverse of the petals considerably lighter. The umbels on small greenhouse plants frequently reach a diameter of 3 inches. This is the fourth most popular novelty. The plant has good form in the pot and is large in the garden.

***SCARLET ROSEBUD (Red Rosebud)**—Vivid scarlet-red or vermillion. The compact plant has glossy-green foliage and a profusion of vividly contrasting flowers. This is the second most popular novelty.

MAGENTA ROSEBUD (Crimson Rosebud, Plum Rambler)—Deep crimson or bluish-red with lighter reverse.

SPECIAL NOVELTY OFFER

For the grower with limited demand
10 each of 10 kinds (our choice). Rooted.
Price Group 2 (Page 48)

BIRD'S EGG

Small carmine dots, similar to the speckling on a bird's egg, stipple the petals of these geraniums. These are among the most popular of the novelties and are excellent geraniums even when unusualness is not considered. Original varieties from France were introduced in this country in 1901 by Peter Henderson & Co. This class was much featured in catalogs until about 1910. Only four of the original varieties still exist, and of these we offer only Double Lavender Pink, a superb variety. The other three varieties we offer are our originations. They are faster growing and hardier than the old varieties.

SINGLE LIGHT PINK—(Bode 1952) Palest pink, abundantly speckled with rose-red. The speckled effect is most noticeable in this variety.

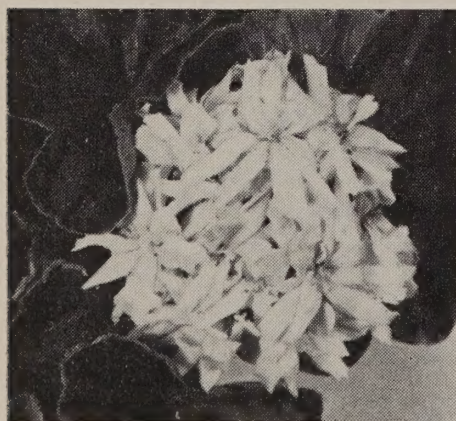
SINGLE CORAL—(Bode 1955) Large flowers of soft coral, speckled rose-red.

SINGLE ROSE-PINK — (Bode 1955) Bright rose-pink, speckled rose-red. Hardy and free flowering. Our own seedling and much superior to an old-time rose-pink.

DOUBLE LAVENDER PINK — Noted for its very large trusses of rosy-lavender double flowers, well speckled with rose-red. A number of greenhouses grow this for its size of flower and beauty, without regard for the attractive speckling. Free-flowering, strong plant.

NOTE: Although quite probably of French origination, it could hardly be Bruant's *Curiosa* that was described as "dwarf grower, medium-sized trusses."

NOEL



MME. MARGOT



DOUBLE NEW LIFE



CACTUS-FLOWERED

Slightly twisted, long narrow petals give a quilled effect to these pretty and interesting flower clusters that usually measure 3 inches or more across. With the exception of Silver Star, Pink Poinsettia, and Poinsettia, all varieties we offer were hybridized by Mrs. H. L. Smith of Los Altos, California, and introduced by Wm. E. Schmidt, well known nurseryman and hybridizer of some of the world's best Pelargoniums and Ivy-leaved Geraniums. Silver Star was originated by Holmes C. Miller, America's foremost hybridizer of Zonals.

SILVER STAR — (Miller 1948) Very large umbels of pure white, single flowers with long narrow petals. Very good plant.

***NOEL** — (Smith-Schmidt 1948) Double white. One of the finest novelites, with an excellent, free-flowering plant.

MORNING STAR — (Smith-Schmidt 1953) Soft double salmon, almost apricot. A unique color and fine, all-around variety.

***PINK POINSETTIA**—Soft rose-pink and very double. Masses of blooms on a compact, low plant. Still the most popular cactus-flowered.

STARLET—(Smith-Schmidt 1955) Soft cerise-pink double with the typical Smith characteristics. Now 3rd most popular cactus-flowered.

SOUTHERN CROSS—(Smith-Schmidt 1953) Large double florets and umbels of deep coral. Zoned foliage. Hardy.

POINSETTIA—Dark, bright red double. Not quite so double as the Smith varieties, but very attractive. Odd fan-shaped foliage on light-wooded plant.

***STAR OF PERSIA**—(Smith-Schmidt 1955) Double, cerise-purple blossoms on an unusually hardy plant for geraniums of this color. This immediately became a trade favorite.

CARNATION-FLOWERED

Notched or serrated petals characterize this group, making very attractive novelites.

MME. THIBAUT—Single white flowers that turn pinkish with age. This two-toned effect is most attractive. The plant is quite small, and free blooming almost to a fault. Mme. Thibaut has been in the trade since about 1880, and it is always popular wherever novelites are grown.

JEANNE (Skelley's Pride, Flame, Carnation, etc.)—Single salmon. Deeply notched petals and moderately large flowers make this an attractive pot plant. Many greenhouses who do not specialize in novelites grow a few hundred pots of Jeanne.

CERISE CARNATION—Large double flowers of crimson-cerise on a large plant. Reverts to a plain-petaled form quite commonly. Strictly a novelty.

CULTURAL NOTE: The Novelities and Fancy-leaved do best in a sandy soil mix with even moisture—not wet. The dryer plant will have better color. Watch the feed, especially nitrates; well fed plants have the best color when properly grown. Full light also brings out brighter colors in the leaves.

OTHER NOVELTIES

SHIRLEY SUMMERS—(J. F. Summers 1949) An unusual sport of Mme. Barney (Pink Barney) that has the same double rose-pink flowers, but with white edges on all petals. It is the most beautiful of all geraniums and in terrific demand.

NOTE: We are able to supply only a portion of the orders, and we ship these in rotation. Unfortunately this is not a "fixed" sport, and it sometimes reverts to Pink Barney, comes all white, or has any combination of the three. We cut only cuttings with Shirley Summers flowers, but cannot guarantee the percentage of white-edged flowers that will result.

Shirley Summers: Price Group 3

MR. WREN—(Conn abt. 1950) Single light red, very attractively tipped white on all petals. One of the most unusual and attractive novelities. It was named for Dr. Wren who found it in the garden of a home of the 1880's at Oceanside, California. This popular novelty should be grown a little dry toward blooming time for the best show.

***DOUBLE NEW LIFE (Stars and Stripes, Flag of Denmark, etc.)** — (Knight 1878) Very double miniature flowers form medium-sized umbels. The narrow petals are striped white and red. A mass bloomer on a compact neat plant.

NOTE: This was originally described by Mr. Knight of Battle, England, as "the fifth eruption of Vesuvius" because it was a sport of the double variety Wonderful, which in turn was a sport of the much-mutating, single Vesuvius.

***SINGLE NEW LIFE (Peppermint Stick, etc.)** — (Cannell 1876) Named New Life by the originator, the "single" was added later. Very striking, single scarlet flowers, freely striped with white. Masses of bloom above dark green foliage on a compact, neat plant makes this a leader. Occasionally, the all-red flowers of Vesuvius and/or the pink-eyed white flowers of New Life Phlox will appear on the same plant.

TWEEDLEDEE—(Miller 1954) Spidery, single, salmon, narrow-petaled flowers that are borne in profusion. Small-stemmed plant with attractive, dark-green foliage that appears leathery and slightly succulent.

TWEEDLEDUM—(Miller 1954) Almost identical with Tweedledee, but the foliage is darker and flowers are a deeper salmon. Both of these varieties make very attractive hanging baskets.

NOTE: Both Tweedledee and Tweedledum are hybrids of black Vesuvius and P. acetosum.

"... and we have them all potted. They are good, healthy looking plants."

Texas Grower (385)

"The geraniums arrived in good shape. Thank you for such nice, well rooted cuttings."

Tennessee Grower (1343)

Fancy-Leaved Zonals

Every year there is more demand for the fancy-leaved varieties, partly because we have been able to supply hardier strains and partly because the public is learning to appreciate these colorful plants more and more. The mail-order house or specialist catering to the hobbyist can well afford to carry all fancy-leaved varieties. However, the commercial grower supplying the gardening public should choose the more popular kinds.

Because the largest growers of fancy-leaved geraniums handle the two to five most popular varieties, there is a wide difference in sales. Mme. Langguth and Skies of Italy both sell about double the amount of either Happy Thought or Double Pollock. These, in turn, outsell Distinction 2 to 1. The remaining dozen or more all sell about the same, roughly half the number of Distinction or one-eighth the number of Mme. Langguth or Skies of Italy. On the other hand, the difference in the varieties is so great that many growers who do not handle large quantities order our special collection so they have a wider selection. Normally, fancy-leaved geraniums sell in the ratio of 1 to every 10 regular zonals.

FANCY-LEAVED ZONALS: PRICE GROUP 2 (See page 48)

Variegated-Leaved

ATTRACTION (1) — Light red single. Gray-green leaves with a narrow white margin. A strong bushy plant.

MRS. PARKER (7) — (abt. 1880) Double pink. Gray-green foliage edged creamy white. The counterpart of Mme. Langguth, but not so robust.

MME. LANGGUTH (Wilhelm Langguth, Caroline Schmidt) (11) — (by 1900) Light crimson-red double. Gray-green leaves with creamy white edges. Hardy and fast growing, this is the leading fancy-leaved.

SILVER LEAF NUTT — Dark red double flowers, similar to Pride of Camden. Gray-green foliage on a strong, free-blooming plant. Silver Leaf Nutt reverts constantly and the grower must trim out the green form.

SPECIAL FANCY-LEAVED OFFER

For growers needing a wide variety
10 each of 10 kinds (our choice). Rooted.
Price Group 2 (page 48)

Tri-Colors

Basically green center, bronze zone, and yellow edge; but on highly bred varieties the center turns to yellow, the zone to red splashed with orange, crimson and purple, and the edge to brilliant yellow.

LISTED PLAIN TO FANCIEST

POLLOCK NO. 137 (2) — Hardy, attractive plant with bright green leaves that are well zoned. Very narrow, bright yellow edge. Single orange-red flowers.

LADY CULLUM (3) — (abt. 1858) Similar to Pollock No. 137, but with more of a yellow cast. Light red single flowers.

SKIES OF ITALY (4) — The 2nd most popular fancy-leaf and a really large seller. Beautiful maple-shaped leaves become highly colored as soon as the plant becomes slightly potbound or is grown slightly on the dry side. Bright yellow leaf has chocolate zone, splashed with orange, scarlet, and purple. Small, single, light red flowers.

DOUBLE POLLOCK (8) — Highly colored zone on a usually all-yellow leaf. Leaves are rounder than Skies of Italy; the plant is more dwarf and compact. The rich coloring is more constant under variable conditions than it is in other tri-colors. Small, double, orange-scarlet flowers.

NOTE: Heretofore, Double Pollock sold at premium prices; but we have developed a strong, fast strain (equal to Single Pollock) and now can offer it for the same price as the other fancy-leaved.

MRS. POLLOCK (Single Pollock) — (Grieve 1858) Identical with Double Pollock, but single flowers. The flowers are of such minor importance that usually they are not a consideration

BLACK JUBILEE



HAPPY THOUGHT



DOUBLE POLLOCK



Bi-Colors

Yellow and green Butterfly Geraniums make up this group. The name refers to the butterfly-shaped mark in the center of each leaf.

HAPPY THOUGHT (14) — (Lynes 1877)

Green leaf with a large, bright yellow butterfly pattern in the center. Single crimson flowers. The 3rd most popular fancy-leaved and a fine, hardy, colorful variety.

CRYSTAL PLACE GEM (15) — (by 1872)

Reverse pattern of Happy Thought, the butterfly is green in a yellow-green leaf. The lower-growing plant than Happy Thought has a neat, compact appearance. Single red flowers.

TURTLE'S SURPRISE (Secrist Red, Lady Esther) — (by 1890)

This sport has a green leaf with a pale yellow butterfly in the center. The stems of the plant are all white. Crimson-red double flowers.

NOTE: In our fields Turtle's Surprise, Mme. Langguth, and Mrs. Parker all revert to the same green-leaved cultivar, F. V. Raspail.

Dwarf Fancy-Leaved

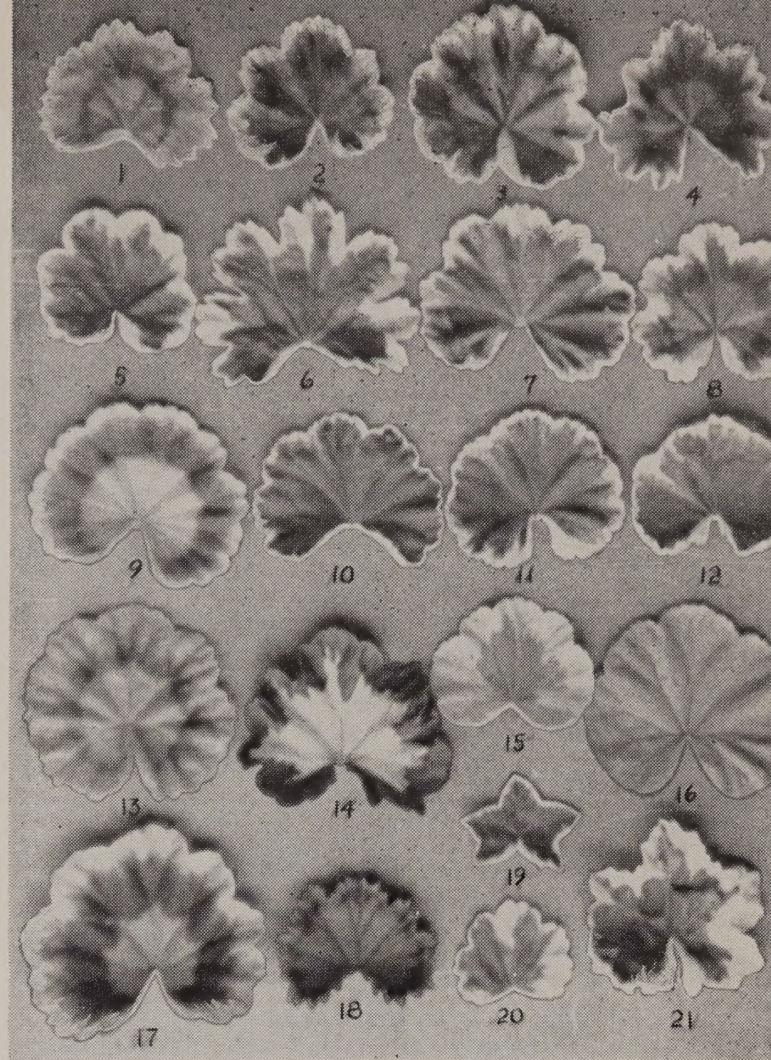
MME. SALLERON (Mme. Salleron) (20) —

(Pierre Mathieu 1877) Dwarf to 6 inches, rarely 8 inches. Cream-edged gray-green foliage rises from basal stems and has a very pleasant fragrance. Fast grower that remains compact and neat. One of the finest border plants. Does not bloom.

NOTE: The above two names of this variety have been in use in the trade for many, many years. However, the history of Mme. Salleron was written by Louis Cappe and first published in *Jardin* in 1895. Cappe stated that the variety was discovered in 1877 as a sport in a border of Mangle's Variegated by Pierre Mathieu, gardener to Monsieur Salleron of Melun, France. Mathieu multiplied the sport and named it Mme. Salleron. The English variety Dandy is sometimes confused with Mme. Salleron, but the two could not possibly be the same, as Dandy was described in 1863 as having small red flowers. Mme. Salleron does not bloom.

LITTLE TROT (6) — A common revert of and slightly larger than Mme. Salleron. The leaves are quite serrated and the plant does bloom with sprays of tiny, pink, single flowers.

NOTE: Not the Little Trot of the last century, which had scarlet flowers; but now sold in England, Australia, and the United States by that name. Probably our present day Little Trot is the old Mangle's Variegated, according to research by Holmes C. Miller.



FANCY-LEAVED GERANIUMS

Numbered from left to right. The numbers correspond to those set in parentheses after each variety name in the descriptive lists.

Other Fancy-Leaved

VERONA (16) — (by 1898) Light rose single. Solid yellow to yellow-green foliage without zone. The flowers and foliage go nicely together. A popular variety here. You who have visited England will remember it as growing everywhere there.

GOLD RUSH — (Bode 1955) Very compact, gold-leaved variety with yellow-green to bright yellow foliage, occasionally marked with an attractive light zone. Single bright red flowers. Usually booked ahead.

DISTINCTION (One in a Ring) (18) — (by 1880) Very compact plant. Bright green foliage with serrated edges and narrow dark zone. Single red flowers. The 5th most popular, and well worth growing.

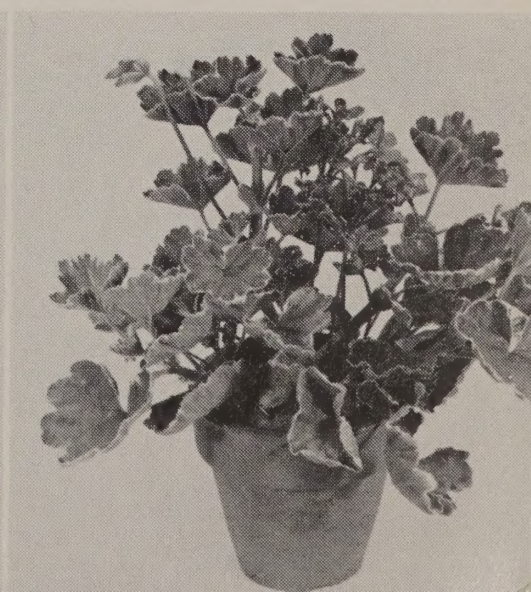
MRS. PARKER



DISTINCTION



ATTRACTION



Bronzed-Leaved

Green, yellow-green, or bright yellow leaves, with chocolate or brown zone.

BRONZE BEAUTY (13)—Single pink flowers. Larger plant than Pink MacMahon.

PINK MACMAHON (9)—Single pink flowers of good quality. The foliage is bright yellow with a splendid, reddish-brown zone. Lower growing than the other MacMahons.

MARSHALL MACMAHON (Marechal MacMahon (17) — (by 1872) Large single scarlet flowers on a compact, medium plant. The foliage is bright yellow with an excellent zone. This is a new strain and the finest we have seen. We believe it will repopularize this variety.

BLACK JUBILEE—(Bode 1958) Single salmon flowers and velvety green foliage with a wide, beautiful chocolate zone and narrow yellow edge on an excellent plant make this new seedling one of the finest Fancy-leaved for pots, gardens, or floral arrangements.

NOTE: See page 28 for 5- inch pots of Black Jubilee and Double Pollock that were grown in 90 days from rooted cuttings, with no special care given them.

MAGENTA MACMAHON — (Bode 1957, Lady Ruth X Marshall MacMahon) Single, bright magenta. Medium-large plant with good color. The magenta flower goes very well with this plant coloring.

BETTY JEANNE—(Seedling from Washington State) Single, orange-scarlet. Yellow-green foliage with a nice dark zone. Strong growing and colorful. Good anywhere; the favorite in the Pacific Northwest.

ALPHA (1)—(abt. 1873) Entirely different from any of the above bronze-leaved varieties. Reputedly a cross of zonal and ivy-leaved, this small-wooded plant has excellent, shiny, yellow to yellow-green foliage marked with a narrow rust-red zone. Fast-growing plant, bearing a profusion of single red flowers. Excellent for gardens, pots, or hanging baskets.

NOTE: Visitors from England and Australia identify this as Golden Harry Hieover.

Dwarfs and Semidwarfs

We grow no miniatures; those tiny, slow-growing varieties that require a full year or more to make a 3- or 4-inch pot. The semidwarfs we offer are all well-proved, commercial varieties that make pot plants in the same growing time as regular zonal geraniums. However, semidwarf plants are more compact and have a low normal height. They vary considerably in both plant form and foliage color.

The dwarfs we catalog this year are limited to those of which we have a reasonable supply, and which have proved to be good shippers. We have handled these varieties for several years and have been constantly sold out. Some other varieties were taken off the market because they did not prove hardy enough to ship well. We are again listing those that are hardy, and we will add to the list as we develop rugged strains of others.

Whenever possible we will make every effort to ship these varieties with booked orders. However, if stock runs too low we will have to ship in rotation, and all orders are booked with this understanding.

NOTE: A number of these varieties are new and are being introduced by us for the hybridizers. The hybridizer's royalty is added to the price, after which no further control is exercised.

DWARFS

(10 to 12 inches the first year in the garden)

DWARFS: PRICE GROUP 3 (See page 48)

FLEURETTE — (Case 1955) Double coral flowers borne freely on a compact plant. Chocolate-green foliage.

GOBLIN — (Kerrigan) Double. Brilliant red flowers on compact plant with dark green foliage. Probably the best Dwarf.

FIREFLY—(Case 1955) Double red flowers. Compact plant with very dark green foliage. One of the hardiest Dwarfs.

MINX—(Miller 1955) Double. Rather large flowers of dark crimson-red on a small, very dark green plant.

SEMIDWARFS

SEMIDWARFS: PRICE GROUP 2 (See page 48)

(Except where noted with variety)

EMMA HOSSLER—Double light pink flowers on a very compact plant. Light green foliage. This Dutch import is not new at all, but it has become very popular during the last few years. Very hardy, and excellent for borders or low beds. Color and form of a small Berthe de Presilly.

TU-TONE—(Donald Wilson 1956) An Emma Hossler X Mr. Everaarts hybrid. The plant has the same characteristics as the parents. The flowers are double, with the colors of both parents in the same flower.

MR. EVERAARTS — Double. Medium rose pink. Like a small version of California Beauty. This has the same plant as Emma Hossler and Tu-Tone. Mr. Everaarts is the most popular of the three.

LITTLE DARLING (Kleiner Liebling) — (Germany abt. 1925) Growth is about half-way between dwarf and semidwarf. The light green foliage is small; the plant, very compact. Showers of tiny, bright pink, single flowers cover the plant for long periods. An old favorite.

DE WIT'S DWARF (True name unknown)—

Single salmon flowers bloom freely on this large semidwarf. Very hardy plant has dark brownish-green foliage and wood. An excellent choice for dark foliage.

BLACK KNIGHT — A Dutch variety with orange-scarlet, single flowers and dark-green, well-zoned foliage. The plant is good, although much looser in form than most semidwarfs.

ROBINHOOD—(Donald Wilson 1956) Clear red double flowers borne in profusion. Bright green, well zoned foliage. This hardy little geranium is rugged enough to use safely for borders where no plants should be missing. Makes an ideal pot plant or window box display.

RED RIDINGHOOD—(Donald Wilson 1956) Bright-red double that resembles a dwarf version of Radio Red. Foliage varies from bright green to brownish green.

NEW SEMIDWARFS

PRINCE VALIANT — (Schmidt 1959) Brilliant crimson-red single flowers borne in masses on a very dark green plant. Prince Valiant is very hardy for this color, and one of the best recent introductions of this type.

Prince Valiant: Price Group 3

ORANGE GALORE—(Schmidt 1959) A compact, low-growing semidwarf with green foliage and bright orange single flowers. This is superb for cooler sections of the country, such as the coastal regions.

Orange Galore: Price Group 3

NOTE: Some stock of Orange Galore was previously sold by the hybridizer.

Ivy-Leaved Geraniums

(*Pelargonium peltatum*)

Our six-acre Ivy-leaved Geranium field accounts for more than half of the stock available to growers. Most Ivy-leaved Geraniums offered to the trade are the coarse, bank or lawn varieties. We specialize mainly in the finer florists' pot plant, windowbox, and hanging basket varieties, growing most of William E. Schmidt's beautiful late introductions and a number we have originated or introduced ourselves.

The Ivy-leaved are all low-growing plants that vary from compact and slightly spreading to long trailing types. Famous for their abundance of bloom, Ivy-leaved Geraniums are especially suited for hanging baskets, window boxes, ornamental trellises, and pots.

Hanging baskets of Ivy-leaved are unquestionably the most popular baskets grown. Some companies grow as many as 4000 baskets a year, making up the baskets in February in plastic houses. The price brought by these baskets is excellent, ranging from \$3.50 to \$10.00. Ivy-leaved Geraniums, started in the fall in 2½- or 3-inch pots and pinched once or twice to keep them from running out over other pots, will make superb hanging baskets by spring. Keep small pots of ivy-leaved well pinched until planted in baskets, urns, windowboxes, etc. They will make rapid growth as soon as they are planted. Another very popular sales item is 4-inch pots of Ivy-leaved Geraniums trained on 12-inch trellises. These can be bought for a few cents from any good supply house.

IVY-LEAVED GERANIUMS: PRICE GROUP 1 (See page 48)

(Except when noted with variety)

COLORS: To make the selection of colors easier, each color group shades from the lightest variety at the beginning of the list to the darkest variety at the end.

COMPACT GROWTH

All the compact varieties will ultimately make growth that will hang to the bottom of the pot or basket, recurving upward. Most are excellent pot plants and like some shade.

THE DUCHESS (13) — (Schmidt 1941) Large, white semidouble, faintly flushed orchid. Petal edges striped pink. An exceptional bloomer and early.

PRINCESS VICTORIA (Enchantress, La France) (16)—(Before 1901) Semidouble, white to light pink with crimson stripes and penciling on petals. Foliage is cupped and about 50% revert to Salmon or Rose Enchantress. Beautiful, but very slow growing. Now, florists generally prefer Jester or The Duchess because of their better plants.

Princess Victoria: Price Group 2

CATALINA (28) — (Conn-Kirsch 1950) Medium rose-pink. Very double. Blooms abundantly.

GIANT SALMON (True name unknown) (12)—Enormous salmon florets, 2 to 2½" in diameter, make up large trusses on this heavy bloomer. Although not an early bloomer, it blooms well in either sun or shade. Plant is low, compact, and rugged.

ESTELLE DOHENEY (15)—(by 1939) Large, double flowers of rich salmon that stand well above the foliage. Large, strong upright plant. Early bloomer.

NOTE: Ivy-leaved are relatively small-stemmed cuttings. We wrap all unrooted (as well as rooted) cuttings in sphagnum moss, 25 to the bundle. However, unless the weather is ideal and the shipping time limited to one day unrooted ivy-leaved geraniums suffer. Most growers who regularly order ivy-leaved geraniums prefer to order rooted cuttings, and we highly recommend this. Rooted cuttings ship very well with practically no loss whatever.

COMPACT IVY-LEAVED (Continued)

ROSE ENCHANTRESS (15) — A revert and Color variation of Princess Victoria but somewhat stronger growing. Rose-pink semidouble.

***JESTER (17)** — (Schmidt 1947) Orchid-pink double with rosy stripes on edges of petals. Beautiful, large flowers on a very free-blooming, good plant. The best of the penciled-petal varieties.

CARNIVAL (12) — (Schmidt 1950) Deep orchid-pink semidouble, with large crimson splashes on petals. A sport of Leopard. Carnival is a strong grower and very colorful.

***LEOPARD (23)** — (by 1900) Large double flowers of orchid-pink, splashed with bright crimson. Very free flowering. A favorite florists' variety and very hardy.

***CAYUCAS (Cayaucas) (12)** — (Rober by 1942) Bright rose-pink semidouble. An abundance of large flowers on a strong, compact plant. (**Rooted only**)

ADMIRAL BYRD (13) — (by 1938) Large semidouble flowers of rich reddish-orchid. A beautiful variety. We have increased our stock due to its popularity.

NEON (17) — (Schmidt 1942) Rosy-cerise double with violet undertone. Makes an excellent plant.

***WILLY (Dark Red, Incomparable) (28)** — (by 1905) Full double, dark red. Strong plant has large wood and ample, neat foliage. Exceptionally fine florists' variety.

***CHARLES MONSELET (22)** — (by 1900) Very showy, double flowers of deep rosy-cerise. Strong, compact plant. Very popular. Very limited stock until new plantings are ready November 1, 1959.

***JOSEPH WARREN (25)** — (by 1938) Large, double purple flowers on one of the best plants. Fairly fast and quite compact.

NEW PURPLE (25) — (Rober abt. 1946) Same as Joseph Warren but darker, especially during hot weather.

MEDIUM TRAILING

The medium trailing varieties eventually make considerable growth, but as young plants they are of medium growth and fairly compact. The Ivy-leaved Geraniums in this group are considered to be the all-purpose varieties.

White

***SNOWDRIFT (21)** — (by 1938) An abundance of very double, pure white rosettes on low, small-wooded plants. Beautiful and very popular. Excellent in corsages.

NOTE: Snowdrift is an albino sport of the Blush and reversions are often seen. Alba Plano is a less beautiful, green-centered form that we no longer grow.

***DOUBLE LILAC WHITE (30)** — (by 1939) Double, white rosebud-type florets, showing only the palest lilac in the centers during the hottest weather or when full-blown. Strong, full plant. The best all-around white.

Red

MRS. H. J. JONES (15) — (by 1914) Light rose-red semidouble with well serrated petals. Fairly good plant makes a fine novelty with unusual flowers.

***CARLOS UHDE (24)** — (by 1914) Double flowers of bright red. When the flowers open wide in hot weather they show a white center. A free bloomer on a very good plant. One of the most popular reds.

***VICTORVILLE (40)** — (Conn-Kirsch 1950) Velvety dark red, very double flowers that open like small roses. Heavy-wooded, fairly compact plant is excellent, but must be kept free of pests.

SPECIAL IVY-LEAVED OFFER

We will send your choice of compact, medium, long-trailing, or best mixed. 10 each of 10 kinds (our choice). Rooted. Price Group 1 (page 48)

Salmon

APRICOT QUEEN (25) — Double flowers open a strong shade of salmon-pink then gradually change to almost white, giving several shades of salmon to each flower head. Small-wooded, neat plant becomes very large eventually, but is considered medium-trailing when young.

DOUBLE SALMON (True name unknown) (22) — An excellent double of clear salmon on a fine, strong plant that is similar to Galilee. This variety will not be available in quantity until November 1, 1959.

GWENDOLYN (19) — (Bode 1955) Bright salmon double with wavy petals. Medium, upright plant has an abundance of flowers.

Cerise

EL GAUCHO (17) — (Schmidt 1949) Bright rosy-cerise double, with slightly violet cast. Large flower heads on a very free-blooming, small, but thrifty plant. A sport of Jester.

MALIBU (12) — (Pitkins 1948) Light cerise-purple semidouble. A robust grower that branches well, with a profusion of large flowers.

OLD MEXICO (11) — (Schmidt 1948) Medium cerise-purple semidouble. One of the smaller plant types, but a robust grower when well grown in a little shade.

DOUBLE ROSE VIOLET (25) — Free blooming, cerise-purple double. Almost identical with Old Mexico, but the color is slightly darker, the flower is more double, and the buds are pubescent.

NOTE: The number within the parentheses after the variety name, VICTORVILLE (40), is the number of petals found on each floret, and will vary little. Varieties marked (*) are the leading commercial varieties and they are usually the most dependable, by far.

Pale Pink to Rose Pink

CAPRICE (13)—(Schmidt 1951) Pale pink, large-petaled, semidouble flowers borne in masses on a low, short-trailing plant.

GALILEE (22)—(France before 1882) Light clear pink double flowers on a very free-blooming plant. A florists' favorite.

PINK RAMPANT (22)—(Bode 1958) Medium pink, double flowers, midway between Galilee and Charles Turner. The medium-trailing plant is a rampant grower with stiff stems and crisp, shield-shaped leaves. Extremely robust, this is the strongest of the ivy-leaved. Excellent for full-sun.

***THE BLUSH (22)**— Beautiful, soft pink, double florets that open like miniature rosebuds. Very small wooded, low growing plant; with soft light green foliage.

LUCKY STRIKE (15) — (Schmidt 1940) Large, deep rosy-pink double. Lighter on petal edges. An exceptionally free-blooming, compact plant.

VALENCIA (13) — (Schmidt 1949) Pink form of the Duchess. This is one of the freest flowering of all, and the variety occasionally seen as a sport on The Duchess and on Caprice.

***SYBIL HOLMES (Sibyl Holmes) (35)**—(Rober by 1941) Short, close growth, literally covered with rose-pink, extremely double, rosebud-type flowers that open very slowly. It takes more than a month from the time the flowers show color until they are fully open, and they last for more than a month after opening.

Pale Orchid to Lavender

COL. BADEN POWELL (15) — (Before 1905) Very light lilac-white semidouble with cerise markings. Large, loose flowers.

***CLIFF HOUSE (20)** — (Rober by 1942) Pale lilac-pink, double flowers on a fast plant. A very popular trade variety, it has all of the fine growing habits of Galilee, from which it sported. Very beautiful.

BARBARY COAST (20)—(Breitner 1957) Large, bright lavender-pink double with light crimson marks on upper petals. This sport of Cliff House has the same splendid plant as Galilee.

NOTE: Mr. Breitner found this in stock shipped to him from our fields. Recognizing the quality of the mutation, he contacted us and recommended that we propagate the variety from the plants which we knew existed. We asked Mr. Breitner to name the variety which he did for the old San Francisco waterfront. Very popular with all who grow it.

LAVENDER QUEEN (22)—Very large, clear orchid semidouble. Very free flowering and an excellent plant.

BRIDESMAID (19)—(Schmidt 1942) Large, double flowers of soft orchid. Extremely free blooming and a fine plant.

HANFORD (19)—So similar to Bridesmaid that they appear to be identical, although we know both were seedlings by different hybridizers. Either is excellent.

***NUTMEG LAVENDER (Lilac Gem, Mauve Beauty) (12)** — A profusion of beautiful bluish-lavender, double flowers. Rose-violet veins on upper petals. Shield-shaped foliage has a nice fragrance of peaches. This scented-leaved variety has replaced those similar, but lighter in color and unscented; Rober's Lavender Rose and Lavender Gem.

***SANTA PAULA (17)**—(Before 1950) Lavender-blue, double flowers, just slightly darker than Nutmeg Lavender and even more popular. A terrific bloomer on a plant that has no superior.

LONG TRAILING

Many growers will recognize varieties in the long-trailing list that they have grown as pot plants for years. Some are extremely popular with florists. These mite-resistant varieties are used for the same purpose as the other varieties, as well as for pots and window boxes that face the full sun on a south exposure. Also, they are used for bank plantings and groundcovers. And, they are the most popular varieties with mail-order houses that must have rugged varieties because of their lack of cultural control.

***MRS. BANKS (14)**—(Before 1910) White, top petals marked violet. Second most popular white and one of the top ten. Mrs. Banks is the albino sport of Comtesse de Grey and frequently reverts.

LONG BEACH (11) — (Conn-Kirsch 1950) Light salmony-pink. Very strong grower.

***COMTESSE DE GREY (11)** — Free blooming lovely soft pink. Top petals lightly marked deep rose. This is the variety to which Mrs. Banks and Mexican Beauty revert. One of the most popular of all the Ivy-leaved.

***SALMON (11)**—(by 1938) Rosy-salmon flowers on long growth. A leader with mail-order houses.

LIGHT PURPLE (13)—Bright cerise-pink. Similar plant and flower form to Comtesse de Grey, but a much darker color. Much sold in California under this name, but as yet we have not been able to correctly identify it.

CESAR FRANCK (21)—(by 1914)) Large double, bright rose-pink, almost identical with Charles Turner. Very strong grower that blooms from late April to frost.

***CHARLES TURNER (Souvenir de Charles Turner) (21)** — (about 1880) Large double, vivid rose-pink. Very strong grower. Constant bloomer. The leading ivy-geranium for all purposes.

COLORS: To make the selection of colors easier, each color group shades from the lightest variety at the beginning of the list to the darkest variety at the end.

LONG TRAILING (Continued)

SANTA ANA (9) — (Conn-Kirsch 1950)
A rampant, rose-pink.

EL CENTRO (12) — (Conn-Kirsch 1950)
Large cerise blossoms on dense growth.

***JUDY (13)** — (Conn 1947) Cerise-purple.
Strong plant with round, zoned foliage.

***INTENSITY (Etincelant) (13)** — (France, by 1913) Brilliant scarlet florets up to 2½" across, make up the beautiful trusses. One of the top ten, and the second most popular bright red.

EMILY SYLVIA (11) — (by 1939) Darker than Intensity.

NOTE: In sales, Charles Turner is the number one Ivy-leaved variety and Mexican Beauty is number two. All are semidouble, except Charles Turner and Cesar Franck, and whether there are 9 or 18 petals, their appearance remains about the same. Charles Turner and Cesar Franck are double. Jeanne D'Arc is single.

***MEXICAN BEAUTY (13)** — This blood-red melano sport reverts occasionally to Comtesse de Grey and is one of the most colorful of the ivy-leaved. Same long-trailing, mite-resistant plant as its parent. Second of all ivy-leaved in popularity.

JEANNE D'ARC — (Lemoine by 1884) Pale lilac single. Very long trailing and small wooded. Stiff, shield-like leaves are well zoned and have a pleasant peach fragrance. A favorite variety to espalier. In California Jeanne d'Arc is often seen climbing 20 to 25 feet into trees, which makes them appear to be blooming.

Variegated Ivy-Leaved

***MME. MARGOT (L'Elegante) (5)** — (In England by 1868) Large, very pale lilac-white single flowers. Very small wood. Green shield-shaped leaves have creamy edges that turn rosy under any adverse condition.

NOTE: Such conditions can be created easily without injury to the plants by favoring the dry side a little, or by placing the plants in full sun for awhile. Normally it likes a cool, moist location or light shade.

SUNSET (Duke of Edinburgh) (5) — Masses of tiny, single, pink flowers on a relatively strong plant with bright cream - or yellow-variegated foliage. Sunset is very different from Mme. Margot. Stands sun very well.

NOTE: See picture, page 29, for leaf of Mme. Margot (19) and Sunset (21). These two variegated Ivy-leaved geraniums are among the finest for hanging baskets, and they are constant winners at flower shows.

Hybrid Ivy-Leaved

(*P. peltatum* X *P. hortorum*)

Most of this group are not truly crosses of such simple origin. This group is typified by richly colored flowers, most of which have a waxy appearance that is very popular with the public. Many growers are not aware of these fine varieties and their uses. All can be grown as pot plants for garden planting and most are equally good for hanging baskets. Weber's Riverside Greenhouses, Milwaukee, Oregon, probably the largest producer of hanging baskets in the United States (4000 baskets), tells us that Scarlet Beauty is their most popular, hanging-basket variety.

HYBRID IVY-LEAVED: PRICE GROUP 1 (See page 48)

Listed from lightest to darkest color.

ALLIANCE (Victory) — (Lemoine 1905)
Very beautiful, pale orchid double with small deep rose blotches on upper petals. Compact plant while young, spreading as it becomes larger. Splendid grayish-green foliage. Excellent for pots or hanging baskets. Second in popularity in this group.

MEMORIES — (Miller 1942) Orchid-pink semidouble. The very large flowers stand well above a good, upright plant. Excellent for pots.

IRMA — (by 1939) Double Salmon-apricot with small white center. Upright plant with glossy foliage and small, green wood. A very popular novelty, with masses of small, highly colored flowers.

INDIANAPOLIS PINK — Exceptionally large, rose-pink double with white center. Flowers stand well above the foliage on a good upright plant. At least 45 years in the trade, Indianapolis Pink is splendid in the cooler areas and very popular in Washington State, although many growers do not know the name.

PINK ALLIANCE — (England abt. 1910) A bright pink version of Alliance and equally beautiful.

NOTE: Named for trade purposes by Wm. E. Schmidt. Australian visitors call it Lady Gertrude.

BONANZA — (Miller 1956) Double, rose with salmon. Large flowers on long stems above a strong, bushy plant similar to Ramona.

RAMONA — Double cherry-red flowers that are a blend of vermilion, crimson, and deep rose. Very free-blooming, compact plant that sometimes appears viny. For hobbyists, not for large volume florists.

NOTE: Holmes C. Miller introduced this nationally from stock obtained in Palo Alto, Calif., in 1937.

***SCARLET BEAUTY (Scarlet Bedder, Corden's Glory, etc.)** — (Before 1898) Semidouble, vivid scarlet. Similar to Intensity (Ivy-leaved) but with a more upright, heavier-wooded plant. Excellent for bedding or hanging baskets.

***E. H. TREGO (Louise)** — Enormous double flowers of intense red, borne on a loosely upright plant. A fine pot plant. Some florists grow up to 5000 of this variety.

Pelargoniums

LADY WASHINGTON GERANIUMS

(*Pelargonium domesticum*)

UNROOTED CUTTINGS shipped Sept. 1st to April 1st.
ROOTED CUTTINGS available Oct. 1st to June 1st or later.

NOTE: Unrooted cuttings can be shipped anywhere by airfreight. We do not recommend shipping unrooted cuttings beyond the 5th zone via Parcel Post. Both rooted and unrooted pelargonium cuttings are wrapped 25 per bundle in sphagnum moss. Rooted pelargoniums ship as well as zonal geraniums, and many thousands are sent by parcel post or airfreight.

CULTURE. Every locality has growers producing fine early-flowering Pelargoniums. It is only necessary to follow a few simple rules to produce splendid plants and profits. A lush Pelargonium will not bloom; so make the plant growth early with normal plant culture. Do not use long-lasting fertilizers such as "hoof and horn" which might keep the plant at rapid growth into the flowering season. Keep the pH of the soil up to between 6.0 and 7.0 at all times, especially near budding time. GROW COOL! Night temperatures of 40 degrees will produce a good stocky plant. Most of the plant size will be made as it starts to bloom. Do not feed from ten weeks before blooming time until buds are well formed; then feeding may be resumed, but keep the nitrates low. However, be sure not to starve the plant of nitrogen.

Keep the plants a little on the dry side while buds are being formed. Remember the causes for delayed bloom are usually all associated with lush growing, so at budding time keep the pH up, keep excess nitrates off, don't force with heat, run a little dry (not arid), always keep on lots of light, and don't shade. In other words, all plants will try to reproduce before dying. The trick is to keep a good plant, but hold conditions just a little on the severe side while buds are forming without injuring the plant.

TIP—Flower shattering of modern varieties is due to removing plants from a warm house into cooler or drafty surroundings. Pelargoniums grown under cool conditions will seldom shatter.

PELARGONIUMS: PRICE GROUP 1 (See page 48)
(Unless otherwise noted with varieties.)

MARKETING. Pelargoniums in 4-inch pots are the most commonly grown size. In California many 3-inch-pot Pelargoniums are produced. Also, all over the country thousands are produced in 5- and 6-inch pots for the florists' trade for Easter, Mother's Day, and Memorial Day. Both varieties and culture have advanced rapidly. We dropped 64 varieties from our catalog this year and added about 30, nearly all of them proven pot plant varieties. Up to the last five years only a few varieties could be depended upon to make Easter plants. Now there are many varieties, if they are properly grown.

For early sales use a light, sandy soil. And, up to and including 5-inch pots, plant the rooted cutting directly into the pot in which it will be sold. This aids considerably in early blooming.

It is not uncommon to hear a grower say that Pelargoniums will not do well in his area. Yet, in almost every area there are many growers producing from a few plants to 20- and 30,000. The advantages of growing Pelargoniums are: (1) Although a little harder to bloom, they are easier to grow than zonals and bring a substantially higher price—a reason that every grower can appreciate; (2) They can be used immediately for garden planting, or for planting in the garden after being enjoyed as pot plants, and (3) They will bloom freely in the garden if they are not overfed (to the home gardener this is really "a switch").

We highly recommend that growers new to Pelargoniums start with relatively small batches until they have a little experience in growing and blooming these plants. However, we do have customers who have gone from 2- to 30,000 in three years. Consequently, after a grower knows this crop he has the satisfaction of knowing that several other growers will not suddenly ruin his market, as is the case with easier-to-produce plants, because the crop does take a little understanding.

For the convenience of our customers we have arranged the leading varieties in their order of sales. This is given for the pot plant trade, not the California nursery trade. Generally speaking, this list is quite accurate, although one or two very large growers favoring a variety or a mailorder house listing the variety will cause it to fluctuate two or three places. However, a few comments are in order. Grand Slam is a 3 to 1 favorite over Grandma Fischer, the No. 2 Pelargonium. Mme. Loyal and Salina jumped many positions, showing that many growers are growing more of the Pansy Geraniums. In spite of the steady gain of Grand Slam, Marie Vogel regained some of the old prestige it lost to Grand Slam. Chorus Girl, a new "May" variety, jumped immediately into the top sellers. Empress of Russia, a steady seller, will suffer during the next few years due to the better South American Bronze. For some reason Congo dropped 50%, although it is a good florists'



FERN LEAF



P. ECHINATUM



PEPPERMINT ROSE



MME. LAYAL

variety. Chicago Market, an oldtime favorite, already shows a slight decline because of the better Corsage, a new "May" variety. Senorita (and probably Congo) dropped this last year because the Pacific Northwest had no frost for the past two winters and there was less demand for these favorite varieties. Neuheit C. Faiss suffered the same fate, Burgundy has dropped steadily in the past few years; and newer, darker varieties, Dubonnet and Rogue, are becoming more popular. King Midas, Chicadee, and Lavender Grand Slam all entered the "first 30" for the first time.

A number of new varieties are listed in this catalog that should be grown much more extensively; and they are already favorites in areas where they are known: Appleblossom, Blossomtime, South American Bronze, Geronimo, Fifth Avenue, and Pink Shell are examples. And, some of the new varieties are so fine that they will be in this list of the 30 favorites very shortly.

1958	1957		1958	1957	
1	1	Grand Slam, rose-red	17	18	Ray Kellogg, colorful pink
2	5	Grandma Fischer, salmon	18	22	Emp. of Russia, dark plum
3	2	Mackensen, rose-pink	19	8	Congo, maroon and rose
4	7	Conspicuous, dark red	20	16	Chicago Market, orchid-pink
5	3	Springsong, med. pink	21	23	Gay Nineties, white
6	15	Our Frances, light pink	22	17	Easter Greetings, cerise-rose
7	19	Mme. Loyal, Pansy Geranium	23	12	Senorita, salmon-red
8	4	Melissa, light pink	24	26	Dawn, apricot
9	20	Marie Vogel, rose-red	25	13	N. C. Faiss, lavender
10	6	Waltztime, orchid	26	21	Burgundy, wine
11	25	Chorus Girl, salmon-red	27	33	Dubonnet, wine-red
12	10	Pink Gardeners Joy, pink	28		Rogue, deep red
13	11	Mary Bard, white	29		King Midas, salmon
14	14	Marie Rober, dark red-purple	30		Chicadee, Pansy Geranium
15	9	Azalea, rose-red	31		Lavender Grand Slam
16	41	Salina, Pansy Geranium	32	31	Firedancer, Cherry-red

METHOD OF READING DESCRIPTIONS

GERALDINE (Gerry Jarrett) — (Jarrett 1935 (5, E) GERALDINE is the correct name. (Gerry Jarrett) is another accepted name. (Jarrett 1935) shows the variety was disseminated by Clara Sue Jarrett in the year 1935. (5, E) indicates the individual flower has 5 petals and is considered early. Other descriptions will contain such numbers as 6-8, which means the average flower will vary from 6-8 petals. Other blooming habits are described thus: C, for relatively continuous; VE, very early, M, medium; L, late; VL, very late.

HANGING BASKET PELARGONIUMS

A number of Pelargoniums will cascade and make good baskets. Choose the small-wooded or sprawling types. The small-wooded kinds will make better baskets.

FLOWER BASKET—(Outwater 1954) (5, C)
Masses of small, vivid rose-pink flowers; lighter edges and crimson blotches on all petals. Low, compact, but eventually spreading plant that cascades beautifully. Small, dense foliage.

BLACK LACE — (Outwater 1953) (5-6, C)
Bright orange stamens show against petals of darkest red-black. Ruffled. Very low-spreading, dense plant makes an excellent basket.

NOTE: Other varieties that make good baskets are: the pansy types, Mme. Loyal and Chicadee, and Melissa, Mary Bard, Vagabond, Senorita, Red Copper, and Yucatan.

NEW MAY INTRODUCTIONS

Mr and Mrs. Harry P. (Clara) May have hybridized Pelargoniums for 20 years. As with all hybridizers, experience brings success. Many of their recent seedlings are of real merit. We have arranged to bring you the finest of these new varieties.

Of course, as with all new varieties, it is impossible to predict exactly which varieties will become leaders and the areas in which they will find the greatest favor. However, already three of the "May" varieties are in the top 30, and at least two more are bound to replace standard florists' varieties. Mood Indigo will probably replace San Diego, and Corsage will probably replace Chicago Market. Each is similar to the older variety, but better.

May Varieties on this page: Price Group 3

(Prices include hybridizer's royalty, after which no control is exercised)

JEZEBEL — (May 1959) (6-7, VE) Very large, soft salmony-red with moderate, almost black blotches on two upper petals. The nicely waved flower is of good texture and it is half again as big as Azalea. The plant appears to be excellent; with soft leaves with serrated edges.

COQUETTE — (May 1959) (5-7, E) Ruffled light salmony-red with light orchid in throat and around petal edges. Nice plant with soft green foliage.

PINK CHIFFON — (May 1958) (6, VE) Extremely ruffled or frilly, light pink with strawberry blotches on two petals. Small compact plant. This is one of the prettiest additions to the Pelargoniums.

MOOD INDIGO — (May 1958) (6, VE) Similar to San Diego and Prince Bismark, but much more beautiful. The plant is lower and more compact, and the flowers are a much deeper and warmer lavender. Long velvety dark blotches on each petal.

CORSAGE — (May 1958) (5-6, VE) Large, clear lavender-pink, bright enough to remain solid under glass. Although Chicago Market has been a leader in this color, Corsage blooms higher above the plant, which is a decided improvement.

CHORUS GIRL — (May 1957) (6, C) Very unusual coloring. Bright salmon, very ruffled flowers with throat and edges of petals a clean lavender. Chorus Girl blooms very early and the flowers increase in size until they match the largest flowered variety by late spring. Already Chorus Girl is the 11th-most-popular Pelargonium, which is outstanding for such a new variety.

GRAND OPERA — (May 1957) (5-6, M) Unusually large white flowers with large bright salmon blotches on all petals. Base of top petals veined with deep crimson. A Springtime-type flower but a much more free-blooming, much stronger plant.



KING MIDAS

KING MIDAS — (May 1956) (5-6 VE) Large, frilly-edged flowers of light salmon, sometimes a golden-salmon. The plant is compact and has a long blooming season. Advance bookings show that this 29th-most-popular variety will climb again this year. It is being heavily booked by the larger, pot growers.

JESSICA MAY — (May 1956) (5-8; E) Large, light salmon-red, slightly lighter in the throat. A good bloomer on a strong plant, this makes an interesting pot plant when produced in 5-inch pots.

SOUVENIR — (May 1957) (6, E) Vivid salmon-red without prominent blotches. The very ruffled, moderate-sized flowers are borne in masses on a neat, top-flight pot plant.

DUBONNET — (May 1957) (6, VE) Here is a soft-foliaged, very compact, self-branching plant that produces masses of dubonnet or bluish-wine-red flowers. The color is dark, but not so dark as to be dull. Here is a splendid variety that has moved up from 33rd to 27th place, which is very good for the darker colors.



GIBSON GIRL



MOOD INDIGO



CORSAGE

White

WHITE CLOUD—(Kerrigan 1952) (6-8, C)

Large pure white flowers, without veining or blotched, on a rather sparse plant which is an absolutely continuous bloomer. This will make a nice pot plant if pinched several times to prevent excess flowering.

WEDDING GOWN—(Schmidt 1956) (7, E)

Pure, glistening white, no blotches or veining. A free bloomer on a strong, heavy-foliaged plant. A fine pot plant in many areas. In hot areas the foliage will burn.

APRIL—(Brown) (6-7, E)

Large, ruffled white with tiny crimson spot on upper petals. Sturdy, compact plant. Fine for pots. Being booked in large quantities this year.

SNOWBANK—(Brown) (5-6, E)

Large, white flowers with spots on upper petals that usually do not show because of overlapping petals. The plant is very strong, and even coarse. Quite a favorite pot plant in Washington and other areas.

MARY BARD—(Diener 1938) (5-7, VE)

Practically a continuous bloomer, the favorite white and the earliest florists' variety. The plant is not small, but it is small wooded and much branching. The color is pure white with light magenta veins. Will bloom for Easter in the North.

Also: *Duchess of Kent*, *Chalee*, *Mardi Gras*, *Sunburst*, *Grace Armstrong*

WHITE SAILS—(Bode 1959) (5-6, VE)

Extremely large, pure white flowers with some veining. A sport of *Prelude*, this is an even more continuous bloomer. While not proved as a pot plant, it can be highly recommended for its fine plant and continuous bloom in the garden. It should equal *Prelude* as a pot plant.

LA PALOMA—(Schmidt 1957) (6-8, E)

Compact, dense, strong-growing plant with an abundance of lovely, pure white flowers. Tiniest of soft carmine markings on top petals.

CITY OF OAKLAND—(by 1948) (5-6, M)

Large, pure white, open flowers with light magenta spot and veins on upper petals. Excellent plant, but later than *Mary Bard*.

GAY NINETIES—(Schmidt 1947) (6-7 E)

Large trusses of glistening white with a large blotch of raspberry-rose on upper petals. Deep rose veins on lower petals. Excellent plant and foliage makes this the 21st-most-popular *Pelargonium*.

GARDENER'S JOY (*Miss Saunders*)—(Germany, by 1913) (7-8, E)

White, sometimes slightly blushed. Large umbels of very large, open flowers. Elongated, ruffled petals have long, narrow blotches on upper petals and veining on lower. Still one of the showiest and best whites.

White with Color

SPRINGTIME—(6-7, E)

Large, strawberry blotches leave only a white throat and narrow white edge around petals. A beautiful flower, but a sprawling plant and a hard one to make into a pot.

CHERIE—(Kerrigan) (5, E)

Beautiful, ruffled white flowers; small, soft carmine spot on each petal. Very free blooming and low, compact growth.

HOLIDAY—(Jack Evans) (7-8, E)

Large, very ruffled white with deep strawberry-red blotches and veins on upper petals. The brilliant markings accent the white of these beautiful blooms, making *Holiday* one of the finest *Pelargoniums*. Excellent for either pot or garden.

JOSEPHINE—(Cassidy abt. 1945) (5-6, C)

White throat, light rosy-pink blotches cover the petals. A somewhat sparse plant, as so many constant bloomers are. But we have seen this variety in the Northern States in 2¼-inch plant-bands in full bloom in February, and the plants no more than 2 or 3 inches tall. Excellent garden plant. Will bloom all summer anywhere.

ALL MY LOVE—(Outwater 1955) (5-6, M)

Large-flowered, ruffled white. Large deep crimson blotches on the upper petals leave only a narrow margin of white. The lower petals are usually all white. The flowers have the appearance of large pansies. While not in the top 30, this is popular with the growers.

Also: *Mrs. Harrison*, *Burlesque*, and *Show Off*

Blush to Strawberry Pink

DEMURE — (Kerrigan abt. 1953) (7, M) Very ruffled, almost white. Upper petals have small carmine spot and veins. A large and beautiful garden plant.

CHERRY PINK — (Schmidt 1953) (5, VE) Soft blush-pink, frilly flowers with deep crimson blotches on upper petals. This pale-pink sport of Conspicuous has similar blooming habits and a stronger plant.

APPLEBLOSSOM — (Cassidy 1939) (5-7, VE) Very light pink on a moderately loose plant. The flowers have a white throat and small markings on upper petals. This is a favorite pot plant, and its abundance of bloom makes it valuable in the garden.

EASTER BONNET — (Outwater 1954) (5-6 VE) Similar to Appleblossom and equally good. Possibly just a little more color.

COVER GIRL — (Kerrigan 1948) (5-6, C) Pale pink, sometimes flushed with slightly darker pink. The small markings show very little. A very frilly flower and a continuous bloomer. The flower and plant are the same as Waltztime and Ruth Eleanore, although lower growing. This is one of the most beautiful light-colored Pelargoniums.

PINK PURITY — (orig. Jarrett, later Horner 1952, under this name) A beautiful light but showy pink, with white throat and no markings of any kind. One of the few such Pelargoniums. A fine pot plant or garden variety. A sport of a sport.

PINK SHELL — (Kerrigan) (5, VE) A delicate light pink and a favorite pot plant. The flowers do not open wide but remain funnel-like, similar to some shells. Different from other Pelargoniums.

BLOSSOMTIME — (Horner 1950) (6-7, VE) Beautiful white, flushed delicate pink. Wavy petals, white throat. Upper petals blotched and veined crimson. Nice-sized umbels (7-10 florets) on a top-quality pot plant. Very good.

BRENTWOOD — (5, VE) Flat round florets of light pink. All petals veined and blotched deep crimson. Low, hardy, compact plant. Excellent for garden or desert.

NOTE: This is not Evan's salmon-colored Brentwood.

Also: Kate Borneman, Anita, Peggy Craddock, Sue Jarrett, Lucy Ann Leslie, Topper, Shone Illa

JUNE BRIDE — (Outwater 1954) (5-6, M) Medium silvery-pink, very large flowers similar to Lucy Ann Leslie; but with lower, more compact plant. Appears almost double in cool weather.

SANTA MONICA — (Diener 1938) (5-6, E) Plain, round, open flowers of soft pink with crimson spot and veins on upper petals. Called "ever-blooming" by Diener, it is still considered excellent.

MELISSA — (Bode 1956) (6-8, VE) One of the top 10 florists' varieties — a position gained in its first two years. Large wavy flowers of clear pink, with some veining and small blotches on upper petals. Plant has small wood and low growth. While its greatest demand is for florists' pots, it is excellent in the garden because it is very early and gives showers of bloom.

PINK FASCINATION — (Brown abt. 1945) (5-6, M) Large, compact umbels of clear pink. Upper petals veined to a crimson spot. Free blooming and a good plant. Although used considerably for pot work, it shatters.

GERALDINE (Gerry Jarrett) — (Jarrett 1935) (5, E) Moderately large, compact plant with masses of early flowers. Medium pink with white throat. Well worth growing in the garden.

OUR FRANCES — (Poss, before 1940) (5-6, E) Light pink with salmon sheen. Upper petals are slightly darker, with plum veins and crimson spot. One of the top 10 and a really fine free-flowering pot plant.

RAY KELLOGG — (Jarrett 1932) (5-7, M) Large umbels of very large ruffled florets of pale pink flushed strawberry. Top petals heavily veined, velvety black blotch. Lower petals have small dark spot. Very colorful and beautiful. Free bloomer.

PINK GARDENERS JOY (Marktgaertners Freude) — (Faiss) (5-6, E) A favorite pot plant of many years standing. Clear strawberry pink. Plum veins and a dark blotch on upper petals.

SUNSET MAGAZINE — (Jarrett 1932) (5, E) This large-flowered sport of Sue Jarrett has the same strong strawberry-pink color, but no markings on lower petals.

Apricot - pink Shades

DAWN — (Kerrigan 1951) (6-8, VE) Masses of large, showy apricot-pink blossoms. Small, velvety maroon blotch on upper petals. As the flowers age they turn lighter, giving a beautifully shaded effect. Fairly low and quite compact. This is probably Kerrigan's most beautiful variety. A real pot plant. A fine bloomer in the garden.

PRELUDE — (Kerrigan 1952) (6-8, VE) Large soft apricot-pink. Almost identical with Dawn, but slightly darker and brighter color. Introduced as an improvement on Dawn. Very fine.

HAPPY DAYS — (Schmidt 1957) (6-8, VE) Beautiful light coral-pink, sometimes almost buff-pink, with white throat. A small burnt-orange spot on top petals. Slightly pinker than Dawn or Prelude, but an almost continuous bloomer on a good plant. New; this will become a favorite.

EL ENCANTO — (Schmidt 1955) (5-6, C) Large umbels of light-edged, soft watermelon-pink flowers that stand high above a comparatively good plant for a continuous bloomer. An excellent garden and cut flower variety.

Apricot Shades

BALLERINA — (Kerrigan, before 1946) (7-8, M) Large umbels of apricot-pink. A beautiful flower, but the strong spreading plant needs pinching. Much grown by the commercial growers.

EVELYN REIST — (May 1952) (6-8, M) Large, ruffled apricot-pink with small veins and burnt orange dot on upper petals. Very similar to Ballerina, with a slightly darker flower and more upright plant that needs less pinching.

Also: Lady Fair, Barcelona, Valentine Girl

Salmon Pink to Salmon

ALICE EASTWOOD — (Schmidt 1948) (5, M) Large umbels of soft rosy salmon, upper petals slightly darker with medium-sized velvety blotches. Bushy growth and nice foliage.

MARY ELIZABETH — (Cassidy 1942) (5-8, C) Long sprays of light watermelon-pink flowers with a white throat. Exceptionally free flowering on large, open plant. One of the best garden varieties.

SOLANO — (F. Howard) (6-8, E) Large umbels of very large, pinkish-salmon ruffled florets. Small blotch on all petals. A leading light salmon.

GRANDMA FISCHER (*Grossmama Fischer*) — (Faiss) (6, E) The No. 2 Pelargonium, this has been a top favorite for many years. Rich salmon with almost-black blotch and veins on all petals, and a well-ruffled flower. Once one of the earliest, Grandma Fischer is still a very dependable early bloomer even in the Northern States. The plant is excellent for pots.

Also: Graf Zeppelin, Orange Prince, Irene Ritchie

GOLDILOCKS — (Horner 1950) (5, VE) Ruffled bright apricot. Small dark blotch and feathering on top petals. Medium-sized moderately bushy plant. Quite popular, especially for gardens.

HARVEST MOON — (Schmidt 1956) (6-7, E) Beautifully ruffled, brilliant salmon-apricot with a very fine, white edge. Small, dark blotch on upper petals. Large, showy flower clusters on an extremely compact plant should make this a favorite for pots.

ORANGE SALMON (*Orange Sal*) — (Brown 1948) (6-8, VE) Very much like Grandma Fischer, but slightly more orange. Excellent pot.

EDITH NORTH — (5-6, VE) A favorite pot in the North. Rangy and open, nevertheless it is a sure bloomer. Bright salmon with brown blotches. Pinch well.

SALMON SPLENDOR — (Kerrigan 1942) (6-8, M) Brilliant salmon; dark brown velvety spots on upper petals. Pot or garden.

FLAME — (Brown by 1947) (5, VE) Plain flowers of vivid deep orange-salmon with lighter throat. Compact, hardy plant will do very well on the desert.

JOY — (Schmidt 1955) (5, C) Very frilly, brilliant orange-salmon. White throat and petal edges. Almost discarded by the hybridizer because of its small flowers, Joy has become very popular for the garden. Flowers, borne in masses on long sprays suitable for cut flowers, will keep for a week.

Robert Barba, who has been our propagator for quite a few years, looks over one of the propagating beds. Each of these 24 beds holds 23,000 cuttings. In addition, there are 8 walk-in houses, 11 benches, and a frame for flats, giving space for a total of more than 1,500,000 cuttings.



Rose Pink to Deep Rose

SPRINGSONG—(Kerrigan 1947) (5-6, VE) Large flowers of light rosy-pink with white throat. Upper petals blotched and veined deep crimson. Very showy for a light color. A favorite (5th most popular) pot plant.

VERA N. WATT—(Diener, 1938) (5, VE) Large, round, flat florets of light rose-pink. Crimson blotch on upper petals and prominent veining on all petals. A popular, early variety.

MACKENSEN (Feldmarshall von Mackensen)—(Faiss) (6-8, E) Very large, rose-pink. Slight veining on all petals with faint orange spot on upper two. Very free-blooming, bushy plant. Third-most-popular Pelargonium.

CAPRICE—(6-8 VE) Beautiful, very ruffled, bright rose-pink florets, borne in sufficient numbers to make large flower heads. The plant is strong and carries its flowers on long stems suitable for cut flowers.

NOTE: In our 1956-57 Catalog we pictured and listed Prince John on page 35. Immediately we received word from England, whence the variety was sent to us, that it was their Caprice, not their Prince John which is deep purple. (Not Rober's "delicate lavender" Caprice either.) Apparently the labels had been mixed during inspection and we, not being aware of the error, listed it incorrectly.

RUTH ELEANORE—(Henley 1938) (5-6, C) Very large trusses of large, ruffled, rose-pink florets. The sturdy plant has crisp, well-crinkled foliage. This should be better known as it is an excellent plant, bloomer, and color.

Also: Rober's Ideal, Glendale, China Rose, Misty Rose, Li'l Abner, Delilah

Rose Red to Crimson

CIRCUS DAY—(Schmidt 1952) (6, VE) Large umbels of large, light rose-red (deep pink) florets. Very like Azalea, but a lighter color. Strong, medium-sized plant.

YUCATAN—(Jack Evans) (6, M) Similar to Azalea but an unusual soft red, flushed with orange, that is pleasing to most people. This variety has become popular in California gardens and as a pot plant.

RED COPPER—(Bode 1957) (5-6, VE) Large, low plant; stronger growing than other reds. The large flowers are soft red with salmony sheen. This variety has never been catalogued, but it already has quite a following.

AZALEA—(6, E) Large, fluted, rose-red; dark blotches on upper petals. Identical with Marie Vogel except for blooming period. An excellent plant for any purpose, and preferred to Marie Vogel in warmer areas.

MARIE VOGEL—(Faiss, before 1925) (6, VE) Favored over Azalea for the North where it reputedly blooms one to two weeks earlier. A fine pelargonium for pots.

GIBSON GIRL—(Schmidt 1958) (6-8, E) Huge, open 3½-inch florets of deep watermelon-pink have an elongated black blotch on each petal. Very spectacular flower clusters on a dense, compact plant that will certainly make fine pots.

PRAIRIE FIRE—(Schmidt 1948) (5, M) Beautiful flame-like coloring on medium-sized, soft pink flowers. All petals are heavily veined and flushed salmon-orange. Floret often looks more like a salpiglossis than a pelargonium.

LOIS MACKAY—(Deiner 1938) (5-6, E) Soft rose, upper petals suffused orange with brown blotch and veins, giving a beautiful two-toned effect. Very popular in the Midwest.

CYRIL WARREN—(Warren before 1948) (6, E) Well ruffled, rosy-red or darker rose-pink flowers borne in masses. Shatters, but blooms well in heat.

LUCY BECKER—(5-6, C) A lighter sport of Easter Greetings. Used in the North for pot plants.

EASTER GREETINGS (Ostergruss)—(Faiss) 5-6, C) Masses of medium-sized, deep cerise-rose flowers with long, velvety brown blotch on all petals. Still a favorite early bloomer in the North (especially British Columbia), where the cerise-rose coloring is pretty and the flower size increases to 3 or 4 inches. In the South the cerise becomes too harsh.

GRAND SLAM—(Schmidt 1950) (5-6, E) The leading pelargonium wherever pelargoniums are grown. Stock we introduced to England through Lady Irene Burton won every horticultural honor for which it could compete. Stock shipped to Germany by Mr. Schmidt replaced Marie Vogel, the leading Pelargonium there, in less than three years. In this country it leads 3 to 1, over the next favorite. Flowers are bright, clean, yet soft red or reddish-crimson (rosy red). They are of excellent size, slightly wavy, and of good texture. The compact plant is superb, with fine form. Soft, pubescent foliage. It is not unusual for growers to produce 10- to 15,000 of this variety.

FIREDANCER—(Bode 1953) (6-8, E) Masses of crimson, ruffled flowers nearly cover the compact, upright plant.

RUBY—(from England 1954) (5, E) Brilliant, dark ruby, plain flowers with just a suggestion of a lighter line around the petal edges.

Also: Mrs. Will Hayes, Robin

COLORS: To make the selection of colors easier, each color group shades from the lightest variety at the beginning of the list to the darkest variety at the end.

Red to Red Black

CARMINE QUEEN—(Karminkoenigin) (Faiss) (5-6, E) Clear light red, dark brown blotches on upper petals. Ruffled. Low, spreading plant.

RED CHIFFON — (May 1952) (5-6, E) Bright, dark red, very ruffled flowers. The plant is strong and quite free blooming. A fine garden variety.

FLAMINGO—(Cassidy, after 1939) (6, VE) Brilliant vermilion like Geronimo, but larger flowers with small blotch on upper petals. Light-wooded plant with long sprays of flowers. A terrific bloomer. Very popular, especially in San Francisco.

GERONIMO—(Kerrigan 1954) (6-7, E) One of the most brilliantly colored Pelargoniums. Bright vermilion with a carmine reverse. The plant is low and compact. Makes a fine pot plant and is very popular for that purpose in San Francisco, as well as in Oregon and Washington.

ZULU KING—(Brown 1947) (5, C) Richly colored rose-red. Upper petals are nearly covered with velvety brown blotch. Small blotch on lower petals. This is a constant bloomer, even through our winters.

ZULU WARRIOR — (Outwater 1956) (5-6, M) Almost the same flower as the old favorite, Zulu King. However, Zulu Warrior is much larger flowered and has finer coloring. Also, the plant is much stronger, with much better foliage.

LITTLE KING—(Schmidt 1959) (5-7, VE) Almost the same flower as Conspicuous, but opens better. Bright dark red which fairly glistens. Each petal has a black blotch. The very self-branching plant appears to be one that will remain low and compact. Should make a fine pot plant.

Also: *Jungle Night, Wolfgang Goethe, Fiery Embers, Mary Quinlan, Velray*

Salmon Red to Red Orange

SALMON SPRINGTIME—(5-6, E) Vivid-salmon-red streaked with white. Narrow, ruffled, pink edge and white throat. Popular, especially in the Northeast.

SENORITA—(Cassidy, by 1946) (5-6, M) Brilliantly colored, large, open flowers. Vivid salmon-red upper petals have dark blotch and veins. Clear salmon-red lower petals. Pale lilac throat and edges. Very popular in the Pacific Northwest.

LOWELL—(Brown 1925) (5-6, VE) Deep salmon-red. Narrow, nearly black blotches on all petals. Upright plant with glossy green foliage. Always one of the first to bloom.

Also: *O. Homer Bryan, Andenken an London, Tangerine.*

NOTE: Generally, volume growers limit their list of Zonal Geraniums to one of each color, with probably two or three reds. However, with few exceptions, large producers of Pelargoniums grow a very large selection of varieties. For example, a grower who finishes out 10,000 Pelargoniums might order 1,000 Grand Slam, 1000 Springsong, 500 Grandma Fischer, and 100 to 200 each of 30 to 50 others. This is done with good reason. While the flower of one good pink Zonal is quite similar to another of the same general color, there is a great variety of colors and flower forms in Pelargoniums. Most Pelargoniums are marketed as flats of 20 to 30 pots, all mixed colors. With such a wide selection, there is sure to be at least one that is irresistible to every potential customer.

CONSPICUOUS — (Brown 1947) (5, C) Large, bright dark-red flowers make this one very well named. Long black blotch on all petals. Upright, small-wooded plant, constantly in bloom. Seventh most popular in 1957, it moved to fourth place this last year.

ROGUE—(Schmidt 1955) (6, VE) Very dark red, almost black, but with enough brightness to give life to the flower. The plant is quite low and compact. A splendid bloomer. Rogue, 28th, has moved into the top 30 in less than four seasons.

BURGUNDY—(Brown 1946) (5-6, E) Brilliant deep wine-red, blotched on all petals. Nicely ruffled edges. The plant is low and compact.

FIFTH AVENUE — (Horner 1951) (7-8, C) Large ruffled flowers of deep, almost black crimson-red. Large velvety black blotches on all petals. Such a continuous bloomer that we were never able to get enough cuttings until the last two years and then only by using special treatment. Small-wooded, upright plant.

BROWN'S BUTTERFLY (Black Butterfly) — (Brown 1953) (5, E) A solid almost black flower. Instead of the usual blotch it has, on each petal, a narrow, broken, rosy stripe across the petal. The effect is very nice and, of course, unique. A fine pot plant.

THUNDERCLOUD — (Horner, abt. 1948) (5, E) Velvety black-maroon, plain flower. Very free blooming. Low, dense plant. A variety as nearly black as this tends not to be colorful, but Thundercloud is still a popular pot plant and borders being a novelty.

PRIME MINISTER MENZIES—(Bode 1956) (6, M) Larger flowers and more brilliant coloring than Senorita, including the lilac shading over the salmon-red. Named by Norvell Gillespie to honor the Prime Minister of Australia during a garden tour he directed through that country. A Bode seedling.

NOTE: Jane Barling, Sydney mail-order floriculturist, gave this variety considerable publicity after taking stock back to Australia with her. The newspapers picked up the theme and used it in cartoons and editorials in a most American-like way: Cartoons of political enemies dropping pots of geraniums on Mr. Menzies as he leaves his office, and editorials stating that it was fitting (?) that a plant like the steady old geranium was named after him, not a pansy or lily. Inadvertantly, geraniums got a great boost in that country where they are now even more popular than in America.

Orchid - Lavender - Plum

AMOUR—(Schmidt 1959) (5-6, VE) Light orchid flower with nice, small, deep plum blotch on upper petals. Lower petals are white in the throat. In the past this type has always been tall and rangy. Amour is tightly compact and very much self-branching. We have counted as many as 13 florets to the umbel.

STARDUST—(Kerrigan before 1947) (5, M) Large plant with very large, pale lilac flowers. A steady, popular variety.

NEUHEIT CARL FAISS — (Faiss) (5, E) Large fluted flowers of clear, silvery lilac. Long blotch of deepest plum on each petal makes the flower very showy. Strong plant and an oldtime, favorite pot plant.

CHICAGO MARKET—(5, M) Large compact umbels of orchid-pink. Small magenta markings on upper petals. Plum veining at base of all petals makes the center darker. Low, exceptionally compact plant.

MIRANDY—(Hosmer 1954) (6, E) Deep rosy-lavender ruffled flowers. Very similar to Ruth Eleanore and Waltztime in growth and flower form. While a newer seedling, this is bound to become popular.

WALTZTIME—(Schmidt 1942) (6-7, C) Very ruffled, bright silvery orchid or lavender sport of Ruth Eleanore. A splendid plant with crisp foliage, upright growth, and masses of superb flowers. 10th most popular, and the leading orchid.

LAVENDER GRAND SLAM—(Schmidt 1953) (5-7, E) Large florets of bright lavender with plum blotches on upper petals. Every good characteristic of Grand Slam from which it sported.

SAN DIEGO — (Diener, abt. 1938) (5-6, E) Large ruffled lavender, described by Diener as "mallow purple." Long plum blotches on each petal. Gray-green foliage.

CAVALIER — (Kerrigan) (5-6, VE) Large, ruffled florets of brilliant lavender. Small blotch on top petals, veins and faint plum spot on lower. A real show in the garden. Needs pinching to make a good pot.

MARIE ROBER—(Rober by 1940) (6-7, VE) Deep purple-magenta, black blotch on all petals. Very large flowers on a strong plant. A sport of Prince Bismark, to which it freely reverts. Used a great deal for pots in the North. Beautiful.

Also: Queen Mary, Merle, Beverley Hills

Dark Colors — Light Edge

BONITA—(5-6, M) Large, orchid flowers with dark velvety blotches on upper petals. Similar to but better than Conchita and others of this type.

CONGO — (Kerrigan by 1948) (5-6, VE) Velvety crimson-maroon blotch shading through rose to lilac edges on all petals. Deeply cut foliage and a good plant make this a favorite for pot or garden.

SOUTH AMERICAN BRONZE — (Brown 1953) (5, E) Deep bronzy maroon (often dark, dull red) with narrow, pale reddish edges that appear almost white. Same flower type as Empress of Russia, but lighter in color and a much better plant and bloomer. Very popular now for pots.

Also: Duchess of Cornwall, Joyce, Marchioness of Bute, Navajo

PANSY GERANIUMS

SEELEY'S PANSY — (Seeley 1959) (5, VE) Same as Mme. Loyal, but crimson blotches on upper petals instead of plum. Very clean and pretty.

Seeley's Pansy: Price Group 3

MME. LAYAL — (5, VE) Masses of small flowers (1¼" diam.) that look like little pansies. Velvety, deep rose-purple upper petals. White lower petals, sometimes tinted with small spots of rose-purple. Medium sized, small-wooded, bushy plant with small leaves. 7th most popular.

CHICKADEE — (Kerrigan 1950) (5, VE) Another attractive pansy geranium. Same as Mme. Loyal, but slightly darker lower petals.

HAILE SELASSIE—(Jarrett 1936) (5, E) Dark plum flowers shading to pink edges. All petals heavily blotched velvety maroon. Very similar to Joan Fontaine but a much better bloomer. Low, compact, bushy plant.

VAGABOND — (Schmidt 1947) (5-6 M) Coarse, sprawling plant; good only as a garden or hobby plant. Beautiful dark plum, almost black flowers with a narrow white edge (often deep pink edge). The pinwheel-type flowers have each petal overlapping the next in a complete circle.

EMPRESS OF RUSSIA — (abt. 1850) (5, L) Dark plum with fine white edge. Popular for pots, even in the North. This was listed in 1897 as Emperor of Russia.

SALINA—(Before 1946) (5, E) Rounder and slightly larger than Mme. Loyal. Upper petals are blotched deep crimson and shade to a pink edge. Lower petals flushed pale pink. Makes an excellent pot.

TINY TIM (Little Tim)—(Conn. 1952) Small pansy (1" flowers) that is almost all plum. Low and quite small, but thrifty, plant. We introduced this for Mr. Conn and then dropped it. Immediately the demand for it increased, and we have had to build stock from a single plant again. During this last year a number of orders for 500 or more have been received, so it undoubtedly is a good pot plant.

Tiny Tim, limited supply: Price Group 2

Scented-Leaved Geraniums

Nearly all of the *Pelargonium* species are native of South Africa. The first Species was sent to Holland from Cape Colony, South Africa, in 1609; but it was in the middle and late 1700's that most of the species were introduced into England. These were the forerunners of all of the present day Scented-leaved, Zonals, Ivy-leaved, Fancy-leaved, Lady Washington Geraniums, Cactus-flowered, etc.

Orders for Scenteds increase each year, and we offer only the finest varieties, each distinct from the other. Very fine for indoor, winter window-plants, they are easy to grow and should be brought on rapidly. Scenteds ship very well and offer a good profit at reasonable prices.

NOTE: Actually very few scented species retain their original wild form today, and those that do are followed by the date they were introduced into Europe (Intr. 1774). The rest are nearly all cultivars (plants created under cultivation) and they are followed by the country and date of origin (England 1820). When the exact date is not known, the earliest recorded date we have is given, and the hybridizer when known (Rober by 1946). Throughout the years, botanists have classified the Scenteds and Species, oftentimes each giving in good faith a different name to a previously named plant, until some have 5 or more botanical names. The botanical names that we include are those that have been used in the trade for many years. Throughout our catalogs synonyms are included only after we have grown the varieties, side by side, to maturity in the field and found them to be identical.

SCENTED-LEAVED (Rooted Only): PRICE GROUP 1 (See page 48)
(Unless otherwise noted with variety.)

LEMON-ROSE

Most "Rose Geraniums" actually have more of a lemon-rose fragrance than real rose. The term "rose-scented" comes from the use of a few varieties, mainly *P. graveolens* and *P. radens*, for the production of geranium oil which is used for scenting high-grade cosmetics, perfumes, and soaps. Large acreages are grown in Europe and Africa (none in the United States). It takes about 800 to 1,000 lbs. of leaves to yield 1 lb. of geranium oil.

NOTE: Listed from the deepest-cut to the least-cut foliage. All are good pot plants.

CROW FOOT, *P. radens* (*radula*)—Very deeply cut, bluish-gray foliage. Rose-scented. Masses of tiny lavender flowers.

DR. LIVINGSTON (Skeleton Rose), *P. denticulatum*—Skeleton foliage on a tall, light green plant. Nice lemon-rose scent. Lavender flowers.

PEPPERMINT ROSE, (*P. graveolens* X *Pungent Peppermint*)—(Bode 1955) Attractive, deeply cut, gray-green foliage on a strong, well shaped plant. Strongest scent of all.

OLD FASHIONED ROSE, *P. graveolens*—Ancestor of many scented and probably the best known of all. Deeply cut, gray-green foliage on a tall, bushy plant. Strong rose scent. Small lavender flowers. Used for flavoring jams and jellies, as well as for the production of rose-geranium oil.

SILVER LEAF ROSE (Grey Lady Plymouth), *P. graveolens*—Growth almost equals its green form, Old-fashioned Rose. Gray leaves have fine white edge.

LADY PLYMOUTH *P. graveolens variegatum*
— (England by 1802) Deeply cut gray-green leaves, widely margined with creamy white. About half the size of Old-fashioned Rose, this makes a beautiful pot or border. Very popular.

NOTE: Lady Plymouth is also sold as Variegated Mint-scented Rose and Minty Rose

ATTAR OF ROSES, *P. capitatum*—A compact mound of light green, tri-lobed leaves. Small lavender flowers. Slight rose scent.

CAMPHOR ROSE, *P. graveolens camphorum*
—Flowers and growth identical with Attar of Roses. Strong camphor scent.

ROBER'S LEMON ROSE—(Rober by 1946) Deeply cut, large, gray-green foliage on a tall bushy plant. Lavender flowers. Excellent scent. Very fine and popular.

ROUND LEAF ROSE—Round, slightly lobed, light green foliage on a semiprostrate plant. Of doubtful origin.

SNOWFLAKE—A variegated form of Round Leaf Rose. Tiny lavender flowers.

OAK-LEAVED

The following forms of *P. quercifolium*, or Oak-leaved, are all pungent scented and have many uses for which they are unsurpassed. The original species was introduced into England in 1774. All have rosy lavender flowers.

FAIR ELLEN—Nicely lobed, smooth, dark-green foliage has very dark center. Compact, well shaped plant is very free blooming. Wonderful filler for floral work and a good pot or garden plant. A very old variety that retains its popularity.

GIANT OAK, *P. quercifolium giganteum*
—Pungent-scented foliage on a large plant that will attain 3 ft. in a season. Attractive in large urns and especially useful in heavy make-up work.

VILLAGE HILL OAK—(Dorcas Brigham) Very similar to Fair Ellen but more deeply cut foliage. Very free blooming. An excellent filler.

SKELTON'S UNIQUE—Rangy, prostrate plant similar to Trailing Oak, but with a darker-centered, less-cut leaf.

TRAILING OAK (Prostrate Oak), *P. quercifolium prostratum*—Low spreading plant with small dark leaves. Excellent filler, especially at the base of large specimens.

PELARGONIUM CRISPUM

The various forms of *Pelargonium crispum* are mostly lemon scented and all make excellent pot or garden plants. They are characterized by stiff, crinkly leaves, radiating closely from stiff, upright stems. The illusion is that of a miniature juniper tree. The light lavender flowers vary from 3/4 to 1½ inches, depending upon the variety.

CRISPUM, *P. crispum* — (Intr. 1774) Dark green, crinkled leaves are crowded along stiff upright stems. Wonderful lemon fragrance. Light lavender flowers.

FINGERBOWL GERANIUM, *P. crispum minor* — Smaller, denser closer-growing foliage than *P. crispum*. Otherwise plant growth is the same. Strong lemon scent.

VARIEGATED PRINCE RUPERT (French Lace), *P. crispum variegatum* — Beautiful, crisp, yellow-variegated foliage on a smaller plant than Fingerbowl. The leading scented last year.

W. R. KIRSCH, *P. crispum* X *P. peltatum* (Conn, 1948) Like Fingerbowl, but a looser flower and freer blooming plant.

FRUIT AND SPICE SCENTS

Listed by scents which are strong and distinct.

NOTE: The first five are varieties of *Pelargonium fragrans*, reported to have been found growing wild in the Karroo, the great plateau of South Africa. All five have identical growth, but leaf size and colors vary.

VARIEGATED NUTMEG, *P. fragrans variegatum* — (Seeley 1957) Nice hit-and-miss, bright yellow variegated form of Nutmeg. We are introducing this novelty for Mrs. Phyllis Seeley of Norwalk, Conn., with whom it originated.

Variegated Nutmeg: Price Group 3

NUTMEG, *P. fragrans* — (Intr. 1800) Small, round, wavy, gray-green foliage on a semi-prostrate plant. Sprays of very tiny white flowers. Nice scent.

FRUITY (Logee Fragrans) — (Logee) Very rich fragrance of ripe fruit. Bluish-green foliage on a compact plant. Tiny white flowers on red stems.

Note: This is a hybrid of Nutmeg and Apple (*P. fragrans* X *P. odoratissimum*)

APPLE CIDER (Cody Fragrans) — Apple and Nutmeg cross with bright green foliage that is larger than Nutmeg.

PINE, *P. fragrans turpenthæ* — Green foilage on a compact plant. Fragrance is more turpentine than pine.

GINGER, *P. torento* — Similar to and possibly hybrid of Lime with larger, less-notched foliage. Grows 14 to 18 inches the first season, making a full, round plant. Large (1") lavender flowers. Popular.

LEMON BALM, *P. melissimum* — Fast, coarse grower with strong lemon fragrance. Nice for pots or garden.

LIME, *P. nervosum* — (England by 1820) Nice lavender flowers and saw-tooth foliage on an attractive, round, low plant. One of the best.

ALMOND (Pretty Polly) — (England abt. 1850) Attractive, light green, compact plant. Silvery pink flowers, upper petals blotched crimson.

WORMWOOD (Southernwood Leaved), *P. abrotanifolium* — (Intr. 1796) Tiny, silvery-gray leaves on a low, woody plant. Tiny white flowers.

STRAWBERRY (Countess of Scarborough), *P. scarboroviae* — (England by 1820) Reddish-green appearing, upright plant. Foliage is similar to but less stiff than Crispum. Small lavender-pink flowers.

PEACH (Gooseberry-leaved) *P. grossularioides* — Hit-and-miss variegated, green and yellow foliage grows close to the stems of a compact, upright plant. Very distinct, rich odor. Pale orchid flowers.

NOTE: The original species, *P. grossularioides* was introduced into Europe in 1731. Of miniature size (6") and peach-scented, it is reported to grow wild in moist places throughout Cape Colony in South Africa. Today's Gooseberry-leaved resembles the Crispums.

CINNAMON, *P. gratum* — Similar to Attar of Roses in plant form, but with excellent cinnamon-rose scent.

ORANGE (Prince of Orange, Citronella), *P. citriodorum* — (England by 1880) Low bushy plant with strong citronella scent. Viola-like, orchid flowers, upper petals blotched crimson. A good bloomer.

PEPPERMINT, *P. tomentosum* — (Intr. 1790) Large, velvety, very pubescent, gray-green foliage on a strong, trailing plant. Tiny white flowers. Wonderful mint fragrance.

PUNGENT PEPPERMINT, *P. denticulatum* X *P. tomentosum* — Deeply cut gray foliage on a fine, large, upright plant. Pleasing mint.

JOY LUCILLE, *P. tomentosum* X *P. graveolens* — Large, 5-fingered leaves on a rangy, very large plant. Makes a beautiful large pot or plant in the garden, with clusters of small pink flowers. Mint scent.

NOTE: Joy Lucille is reported to be identical with Lady Seymour, a variety known in England by 1910.

SPECIAL SCENTED OFFER

Many growers with limited demand prefer to order Special Offers of Scenteds. Here, you may make your own choice of varieties (subject to substitution in case of shortages).

Price Group 1 (page 48)

NOTE: The Scenteds are an excellent choice for either indoors or outside in the rockery or garden, and a number of varieties make splendid hanging baskets. Two 4-inch pots of Nutmeg, planted in a wall basket in March, will make a full basket by June. And, many give off their fragrance when just sprayed with water.

FLOWERING SCENTEDS

The varieties in this group are grown more for their flowers, decorative effect, or make-up value for the fragrance of their leaves, which is oftentimes quite pungent.

CLORINDA — (England by 1907) Large, bright rose-pink flower clusters on a tall, compact plant. The largest flowering of the scented, Clorinda is popular for pots or garden. Faintly eucalyptus-scented, it is supposedly a hybrid of *P. denticulatum* X *P. domesticum*, which could mean anything.

APRICOT (M. Ninon), *P. scabrum* — Brilliant crimson-red florets, about one inch across and 5 or 6 to the umbel, stand out against deeply cut, bright green, crisp-appearing foliage. A beautiful and popular pot plant. Supposedly apricot-scented foliage.

NOTE: The original South African species was introduced into England in 1775. The one that is grown today is undoubtedly a hybrid, that closely resembles the species. The name M. Ninon could very well be an American misspelling of Madam Nonin, a recognized variety in England.

SHOTTESHAM PET — A myriad of small, brilliant rosy red flowers on a low, light green plant. Deeply cut foliage. A collector's item. Filbert-scented.

SHRUBLAND ROSE (Shrubland Pet) — (England abt. 1849) Large, dark-centered, glossy foliage on a large, fast shrub. Masses of brilliant crimson flowers. Excellent background bedder.

MRS. TAYLOR — Small bright red flowers on a trailing plant. Deeply cut, crinkly foliage.

MRS. KINGSLEY (Mrs. Kinsley, Mrs. Kingsbury) — (England by 1880) Bright purple-cerise flowers on a low, spreading plant. Gray-green, very curly, deeply cut foliage. Excellent in the garden. Rollison's Unique is preferred for pots in the greenhouse.

ROLLISON'S UNIQUE — (England by 1880) Quite like Mrs. Kingsley in growth but the cerise-purple flower clusters are darker in color and the foliage is less curly. Excellent for indoor pots.

BRILLIANT — (Calif. (?) by 1944) Light-centered, vivid cerise-purple flowers on a good plant. Dark green, pungent foliage.

NOTE: Previously listed as Capri, which is much redder. We thank Mrs. Helen Guillou for catching our mistake.

PHEASANT'S FOOT *P. viscosum* — (Intr. 1777) Strongly pungent, dark-green, finely cut sticky foliage on a very trim, upright plant. Pale orchid flowers. Popular collector's item. The species grows wild in the southwest part of the Cape of Good Hope.

FERN LEAF, P. filicifolium — Same as Pheasant's Foot, but with very fine, lacy foliage.

OLD SCARLET UNIQUE, P. fulgidum — (England, possibly by 1819) Large gray-green plant with soft, deeply cut foliage. Masses of large bright red flowers, blotched black on upper petals.

Species Pelargoniums

SPECIES: PRICE GROUP 2

(Except as otherwise noted with variety)

P. echinatum (**Sweetheart Geranium**) — (Intr. 1794) Beautiful, small orchid-like blossoms, borne in clusters on tall, branching stems, are white to light pink with tiny crimson heart on upper petals. Small, gray-green foliage on thick, spiny much-branched stems. Sometimes called Cactus-stemmed Geranium. This is really beautiful.

P. acetosum — (Intr. 1774) Pretty, gray-green succulent foliage on very tiny stems, Spidery, pale salmon flowers. Small plant makes a nice filler in window boxes.

P. stapeltoni (**Red Sweetheart Geranium**) — (England by 1820) Very similar to *P. echinatum*, but the stems are smaller and the flowers are a beautiful, deep reddish-pink with all petals marked. Very beautiful.

Red Sweetheart Geranium: Price Group 3

P. scandens (**Climbing Geranium**) — (To Germany by 1790) Spidery, pale orchid flowers on long stems. Light green, glossy foliage on a well shaped plant. For the collector.

P. frutetorum — (Intr. 1932) Dark-green foliage with a well defined, brown zone, and masses of bright salmon, single flowers on a spreading plant.

P. DARK BEAUTY — Identical with *frutetorum* except the entire center of the leaf is brown and the plant is about half the size.

P. gibbosum (**Evening Scented Geranium, Knotted Stork's Bill, etc.**) — (Intr. 1712) Soft gray-green, succulent foliage. Odd-swollen-jointed stems. The small greenish-yellow flowers are sweetly scented at night. Makes an excellent espalier.

P. blandfordianum — (England 1805) Pungent-scented, deeply cut, gray-green foliage on a sparse plant that was first raised by the Marquess of Blandford in 1805 (the parentage is apparently everybody's guess). Small white flowers.

P. papilionaceum — (Intr. 1724) Large, pubescent leaves on a shrubby plant. Sprays of small, white or pale pink flowers.

"Shipment arrived in tip-top shape. Very pleased with manner of packing and quality of stock."

New Jersey Grower (813)

"We are certainly very well pleased with the thick-stemmed, well rooted cuttings that you sent us."

California Grower (931)



Geranium Books

GERANIUMS - PELARGONIUMS by Helen Van Pelt Wilson. 240 pages, 5½" x 8", 6 colored plates, 13 full page black and white pictures, and many more fine full page line drawings. The first edition of this book has been the geranium handbook of America for more than ten years. This edition is a complete revision with new lists and advice that comes with an extra ten years of experience. While professionally written for the hobbyists, it contains much that is valuable to the retail grower, such as material that can be passed along to customers and answers to their questions — information that will make interesting and pleasant sales talk. The book covers everything from history to hybridizing.

Cloth bound postpaid \$4.50

The two English geranium books listed below, both written by professional geranium growers, are well worth having but are sometimes difficult to find here in America. Although both are written so that the novice can enjoy them, the cultural information is of particular value to the commercial grower.

GERANIUM GROWING by H. G. Witham Fogg. 96 pages, 5"x7¼", 9 black and white pictures plus line drawings. Covers all the usual chapters from history (very good) through propagation to pests and their control.

paper bound postpaid 75c

GERANIUMS by Derek Clifford. 83 pages, 5"x7¼", 12 full page black and white pictures. Derek Clifford really knows geraniums and his growing methods are excellent. Many interesting comments are found in this book.

Cloth bound postpaid \$2.00

California customers add 4% sales tax.

"I buy from several different sources and yours were by far the best last year, so I might combine my whole order this fall."
Montana Grower (504A)

"Geraniums on our order 8507 arrived in wonderful condition"
New York Grower (89)

"Sure a fine order came by mail, I like the plants very much, really nice."
Nebraska Grower (995)

"Thanks so much for your fine service and your fine cuttings. They arrived right on time (less than 30 hours)!"
North Carolina Grower (1087)

"... they were the best Geranium cuttings we have ever received."
Michigan Grower (1345)

"Your cuttings have been consistently good, and a nice profit for us this year."
Texas Grower (1053)

WE SUPPLY ROOTING POWDERS

CUTSTART rooting powders are used by practically all geranium growers, because the special mixtures compounded for Geraniums and Pelargoniums are mild and contain the hormone chemicals most advantageous for producing a good number of roots as rapidly as possible, without keeping the side eyes dormant. Most "off-the-shelf" brands are entirely too harsh and will do considerable injury to geraniums. Diluting, or tapping off most of the strong dust, is still not good.

Prices for the following mixtures of **CUTSTART** are:

1lb. postpaid
\$4.40

6 lbs. postpaid
\$20.00

12 lb. drum postpaid
\$32.00

- | | |
|--------------------|---|
| CUTSTART ½X | Pelargoniums (Lady Washington)
Poinsettia tip cuttings. |
| CUTSTART 1X | All Geraniums (except Lady Washington)
Begonias, Fuchsias. |
| CUTSTART 2X | Mums, Carnations, and most foliage plants. |

NOTE: One pound will dust 20,000 cuttings. Cutstart does not deteriorate if stored in a dark place.



PRICES

The field growing of geraniums is a large volume, low profit, farm-type business. Prices are based on grower-to-grower sales — from us to you. No discounts are offered beyond quantity prices, which are based solely on labor and processing cost for the quantity ordered. Thus, as prices are based upon the quantity of each variety ordered, the grower ordering 50 each of 20 varieties pays the same for his geraniums (plus extra labor costs) as the grower who orders 1,000 of a variety.

Simplified Price Grouping

Of all Geraniums ordered, 90% are in Price Group 1, with the more difficult-to-grow varieties and new introductions in Price Group 2 and Price Group 3.

NOTE: All prices are based on the quantity of each variety ordered.

Price Group 1

Group 1 includes the following classes: Single Zonals; Semidouble and Double Zonals; Ivy-leaved; Pelargoniums, and Scented-leaved.

Rates per each variety ordered:	Unrooted	Callused (Zonals Only)	Rooted
10,000 Rate (2500 or more)	\$37.50 per 1000	\$62.50 per 1000	\$75.00 per 1000
1,000 Rate (250 to 2500)	40.00 per 1000	65.00 per 1000	80.00 per 1000
100 Rate (100 to 250)	4.25 per 100	6.75 per 100	8.25 per 100
50 Rate (50 to 100)	2.25 per 50	3.50 per 50	4.25 per 50
Rooted Only: Min. 25 of a kind	Min. 50 of 1 kind	Min. 50 of 1 kind	2.25 per 25

Special Offer On Above Classes

For growers with a limited demand or who wish to test sales potential we offer any of the above classes.

Rooted: 10 each of 10 varieties (our choice) -----\$9.00

(Varieties are always selected for your area. Please specify class desired. Order as many Special Offers as you wish, but we cannot mix classes in any one Special Offer.)

Price Group 2

Price Group 2 includes the following classes: Unusual Geraniums (Novelties); Fancy-leaved; Semidwarfs, Species, and some new or scarce Zonals, as noted with descriptions.

Rates per each variety ordered:	Unrooted	Rooted
1,000 Rate (250 or more)	\$45.00 per 1000	\$90.00 per 1000
100 Rate (100 to 250)	4.75 per 100	9.25 per 100
50 Rate (50 to 100)	2.50 per 50	4.75 per 50
Rooted Only: Min. 25 of 1 kind	Min. 50 of 1 kind	2.50 per 25

Special Offer On Above Classes

Rooted: 10 each of 10 varieties (our choice) -----\$10.00

(Please specify class desired for each Special Offer. Classes cannot be mixed,)

Price Group 3

Price Group 3 includes hybridizer's new varieties and their royalties (new Zonals are Price Group 2), after which no control is exercised. Price Group 3 also includes all Dwarfs and other varieties that require considerable growing cost, such as Shirley Summers, etc.

Rates per each variety ordered:	Unrooted	Rooted
1,000 Rate (250 or more)	\$55.00 per 1000	\$100.00 per 1000
100 Rate (100 to 250)	5.75 per 100	10.25 per 100
50 Rate (50 to 100)	3.00 per 50	5.25 per 50
25 Rate (Rooted only, 25)	-----	2.75 per 25
10 Rate (Rooted only, 10)	-----	1.15 per 10

NO DISCOUNTS ARE OFFERED. THESE PRICES APPLY TO ALL CUSTOMERS.

MINIMUM TOTAL ORDER IS 100 CUTTINGS

(Orders for less than 100 cuttings cannot be accepted.)

Shipping Charges

All prices include packing and free delivery to Los Angeles International Airport (all airlines) or to the post office. Airfreight is sent cartage collect, as is customary with all airfreight. Postage will be prepaid when postage is included with order (see Parcel Post, page 11).

FERTILIZERS

Growing geraniums is our business, and we are not very business minded about having sidelines. However, a number of years ago we found that many of our customers were unable to get high-quality rooting powders, so we catalogued CUTSTART which is especially compounded for Geraniums and Pelargoniums in grades 1X and 1/2X. Today, all large growers of these plants use CUTSTART, and we supply hundreds of pounds each year.

Similarly, while many fine fertilizers are available in most areas and the freight can be saved by buying local products, we do know that many of our customers are in off-line areas where it is very difficult to get quality fertilizers for greenhouse growing, especially fertilizers suitable for geraniums. Also, dozens of customers have found it impossible to find dolomitic lime in their areas (Before giving up, be sure to contact your County Agricultural Agent or Farm Advisor). And, as dolomitic lime is the finest form of calcium and magnesium for plants, and both are combined in this product, we have decided to handle it and two exceptionally fine fertilizers for our customers.

LIQUINOX is a superior liquid fertilizer, formulated with a large percentage of Yucca juice. This is no "sales gimmick". It supplies organic minerals and trace elements and is a terrific wetting agent. We have made tests with half a test tube of dry, fine-textured soil and, using plain water, a wetting time of 20 minutes was necessary to reach the bottom, with much of the water remaining puddled on top. The same test with LIQUINOX added to the water resulted in complete wetting in less than 3 minutes, with all water draining to the bottom. Chemicals are added to the Yucca juice to bring it to a balanced fertilizer, and we offer it in the analysis of 10-10-5, which has been found to be ideal for geranium growing. We use hundreds of gallons every year for watering-in our newly planted cuttings in the fields. LIQUINOX is mildly acid reacting. Use 1/2 to 1 fluid ounce per gallon of water. (One gallon equals 128 fluid ounces.)

LIQUINOX, shipped Railway Express collect.

	ship wt.	price
1 gallon	12 lbs.	\$ 3.00
1 case of 4 - 1 gal. bottles	55 lbs.	\$10.00
5 gal. Polypak (Paperboard container)	55 lbs.	\$10.00
with polyethylene bag and convenient spout.)		

SPOONIT, a very high quality fertilizer, was originally compounded for the home gardener, but it has since become very popular with commercial growers. SPOONIT is a soluble, dry, all-chemical fertilizer carefully formulated with nitrate, ammoniac and organic-type nitrogen for even feeding. It has carefully balanced trace elements and the iron is in chelated form. It is moderately acid reacting, but not severely so. If the potting soil has a neutral pH and there is ample lime, no problem should be encountered. In our own practices, we prefer switching from one fertilizer to another, even when obtaining the same basic chemicals, because of the residuals supplied by various chemical or organic fertilizers. SPOONIT is completely soluble for liquid fertilizing. We offer it in the analysis of 18-20-16. For greenhouse geranium feeding use 1/4- to 1/2-ounce per gallon of water every 5th or 6th watering.

2 1/2 lb. package, postpaid \$2.50 10 lb. drum, Express collect \$7.00
25 lb. drum, Express collect \$16.00

DOLOMITE (Dolomitic Lime) is approximately 60% lime and 37% magnesium, in forms that are available to the plant throughout its pot life. This is the best form for using in potting soils for Geraniums and Pelargoniums. We use one ton per acre in our field preparation. Most soil mixtures recommend about 10 lbs. to the cubic yard of potting soil. In most areas, dealers offer dolomite lime for around \$2 to \$3 per 50 lb. sack, but we have heard of such astronomical prices as \$15 and \$18. If such exist in your area or you cannot locate Dolomite, we will supply 10 lb. packages (75c plus postage) enough for up to one yard of potting soil, at the following rates, postpaid:

Zones 1, 2, 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8
\$1.60	\$1.82	\$2.12	\$2.47	\$2.88	\$3.24

NOTE: If shipped with cartage collect Geranium Order, the price for a 10 lb. package of Dolomite is 75c.

TIPS ON ORDERING

BOOK AHEAD IF POSSIBLE—It helps reserve short items. It helps plan shipping dates during rush periods.

BE SURE WE HAVE YOUR PHONE NUMBER—We include it with your address on all packages. It helps avoid delays.

AIR EXPRESS is requested by many growers when they mean **AIR FREIGHT**. If you do want **AIR EXPRESS** (page 11, Shipping Methods) please underscore the word or make special note of it.

CANADIAN CUSTOMERS should apply for their import permit as early as possible. We supply commercial invoices, etc., at no extra charge.

PAYMENT may be made by check or money order; or, on reserved orders, payment may be sent anytime before shipping date. Many growers prefer to have their orders sent **COD**, which may be done with any method of shipping. However, **we must have your written permission to ship COD**. We do no open account business. This is no reflection on anyone's credit, but a must in our industry.

MOST DELAYS AND LOSSES occur in the actual destination city. We send an airmail postal card or letter the day the shipment is made. You should notify the post office, express agency, or airfield that you are expecting a shipment and arrange to pick up the order yourself, if possible. Day-long rides in delivery trucks during extreme heat or cold damage stock.

CLAIMS are very seldom necessary. **OPEN CARTONS UPON ARRIVAL**. If the shipment shows signs of frost, sweating, or damage due to rough handling get an inspection slip from your agent and file a claim for a portion or all of the shipment, as conditions may warrant.

ALL STOCK offered in this catalog is available the year around, unless sold out or otherwise noted. Orders booked in advance are shipped in rotation and on, or as near as possible to, the date booked for. In case of crop failure or other conditions beyond our control, all accepted orders are subject to cancellation or adjustment by prorating.

WARRANTY—We do not substitute without permission. In the case where varieties are in small quantity we may send a like variety, if necessary, but at our responsibility. In any case of loss or misunderstanding, we will not accept liability beyond replacing the original order.

CALIFORNIA CUSTOMERS MUST INCLUDE SALES TAX PERMIT NUMBER

(See Parcel Post, Airfreight, etc.,—pages 11 and 12)

SOUTHERN CALIFORNIA GERANIUM GARDENS

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Gardena, California

Phone: Compton, Calif. — NEwmark 1-5538

